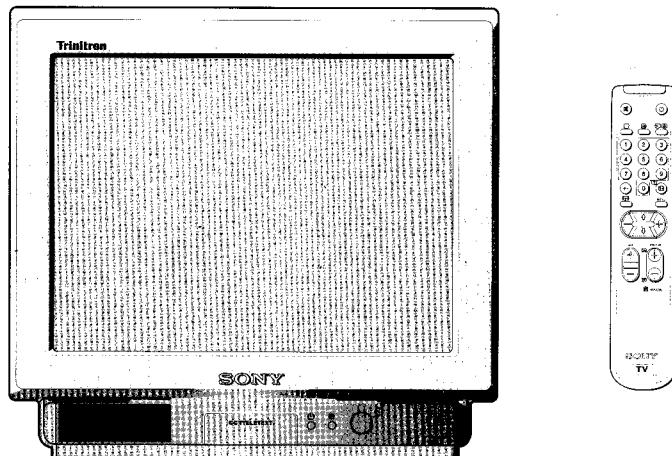


# SERVICE MANUAL

**BE-4A CHASSIS**

MODEL	COMMANDER	DEST.	CHASSIS NO.	MODEL	COMMANDER	DEST.	CHASSIS NO.
<b>KV-M2170A</b>	RM-836	Italian	SCC-J05B-A	<b>KV-M2170K</b>	RM-836	OIRT	SCC-J03B-A
<b>KV-M2171A</b>	RM-836	Italian	SCC-J05A-A	<b>KV-M2171K</b>	RM-836	OIRT	SCC-J03A-A
<b>KV-M2170B</b>	RM-836	French	SCC-J06A-A	<b>KV-M2171KR</b>	RM-836	Russian	SCC-J03C-A
<b>KV-M2171B</b>	RM-836	French	SCC-J06B-A	<b>KV-M2170L</b>	RM-836	Irish	SCC-J02B-A
<b>KV-M2170D</b>	RM-836	AEP	SCC-J08A-A	<b>KV-M2171L</b>	RM-836	Irish	SCC-J02A-A
<b>KV-M2171D</b>	RM-836	AEP	SCC-J08B-A	<b>KV-M2170U</b>	RM-836	UK	SCC-J01B-A
<b>KV-M2170E</b>	RM-836	Spanish	SCC-J04B-A	<b>KV-M2171U</b>	RM-836	UK	SCC-J01A-A
<b>KV-M2171E</b>	RM-836	Spanish	SCC-J04A-A				



**TRINITRON® COLOR TV**  
**SONY®**



ITEM MODEL	Television System	Channel Coverage	Colour System
Italian	B/G/H	VHF: E2-E12, S1-S20 UHF: E21-E69	PAL
French	B/G/H, L	VHF: E2-E12, S1-S20, S21-S41, F2-F10, B-Q UHF: E21-E69, F21-F69	PAL, SECAM
AEP	B/G/H	VHF: E2-E12, S1-S20, S21-S41 UHF: E21-E69	PAL, SECAM
Spanish	B/G/H	VHF: E2-E12, S1-S20, S21-S41 UHF: E21-E69	PAL
OIRT Russian	B/G, D/K	B/G VHF: E2-E12 UHF: E21-E69 Hyper: S1-S41 (KV-M2170K/M2171K) Super: S1-S20 (KV-M2171KR) D/K VHF: R01-R12 UHF: R21-R69	PAL, SECAM NTSC3.58/4.43 (video input only)
Irish UK	I	VHF: A-J (KV-M2170L/M2171L) UHF: 21-69 Hyper: S1-S41 (KV-M2170L/M2171L)	PAL

MODEL	Italian	French	AEP	Spanish	OIRT Russian	Irish UK
Power Consumption	58W	58Wh	58W	58W	58W	75W

## SPECIFICATIONS

Picture Tube      Hi-Black Trinitron  
                     Approx. 55 cm (21 inches)  
                     (Approx. 51 cm picture measured  
                     diagonally)  
                     100° -deflection

### Input/Output Terminals

#### [INPUTS]

- 21-pin connector (CENELEC standard)
- audio / video input
- RGB input

#### [OUTPUTS]

Ω Headphone jack : minijack

Sound output      4W (RMS)

                    5W (music power)

Dimensions      513x475x475 mm approx.

Weight      Approx. 21.0kg

Supplied accessories      RM-836 Remote Commander (1)

                    IEC designated batteries (2)

Other features      TELETEXT (KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171KR/M2171L/M2171U)

## [RM-836]

Remote control system infrared control  
 Power requirements 3V dc (2 batteries) R6 (size AA)  
 Dimensions Approx. 210x45x24 mm (w/h/d)  
 Weight Approx. 90g (Not including batteries)

Design and specifications are subject to change without notice.

Item	Model name KV-M2170A KV-M2171A	KV-M2170B KV-M2171B	KV-M2170D KV-M2171D	KV-M2170E KV-M2171E	KV-M2170K KV-M2171K KV-M2171KR	KV-M2170L KV-M2171L KV-M2170U KV-M2171U
Pal Comb	OFF	OFF	OFF	OFF	OFF	OFF
PIP	OFF	OFF	OFF	OFF	OFF	OFF
RGB Priority	ON	ON	ON	ON	ON	ON
Woofer Box	OFF	OFF	OFF	OFF	OFF	OFF
Scart 1	ON	ON	ON	ON	ON	ON
Scart 2	OFF	OFF	OFF	OFF	OFF	OFF
Front in (3)	OFF	OFF	OFF	OFF	OFF	OFF
Scart 4	OFF	OFF	OFF	OFF	OFF	OFF
Projector	OFF	OFF	OFF	OFF	OFF	OFF
AKB in 16:9 mode	OFF	OFF	OFF	OFF	OFF	OFF
Norm B/G/H	ON	ON	ON	ON	ON	OFF
Norm I	OFF	OFF	OFF	OFF	OFF	ON
Norm D/K	OFF	OFF	OFF	OFF	ON	OFF
Norm AUS	OFF	OFF	OFF	OFF	OFF	OFF
Norm L	OFF	ON	OFF	OFF	OFF	OFF
Norm SAT	OFF	OFF	OFF	OFF	OFF	OFF
Norm M	OFF	OFF	OFF	OFF	OFF	OFF
Language Preset	Italian	French	German	Spanish	OIRT	English

### WARNING ( KV-M2170L/M2171L/M2170U/M2171U only )

The flexible mains lead is supplied connected to a **B.S. 1363** fused plug having a fuse of **5 AMP** capacity. Should the fuse need to be replaced, use a **5 AMP FUSE** approved by **ASTA** to **BS 1362**, ie one that carries the  mark.

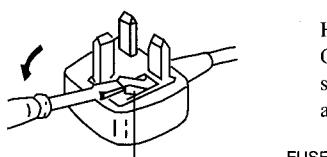
IF THE PLUG SUPPLIED WITH THIS APPLIANCE IS NOT SUITABLE FOR YOUR SOCKET OUTLETS IN YOUR HOME.

IT SHOULD BE CUT OFF AND AN APPROPRIATE PLUG FITTED.

THE PLUG SEVERED FROM THE MAINS LEAD MUST BE DESTROYED AS A PLUG WITH BARED WIRES IS

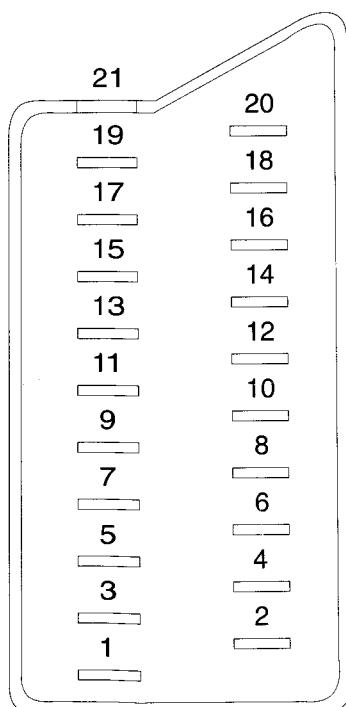
DANGEROUS IF ENGAGED IN A LIVE SOCKET OUTLET.

When an alternative type of plug is used it should be fitted with a **5 AMP FUSE**, otherwise the circuit should be protected by a **5 AMP FUSE** at the distribution board.



How to replace the fuse.

Open the fuse compartment with the screwdriver blade and replace the fuse.

21 pin connector ( -1 )

Pin No		Signal	Signal level
1	○	Audio output B (right)	Standard level: 0.5Vrms Output impedance:less than 1kohm*
2	○	Audio input B (right)	Standard level:0.5Vrms Input impedance:More than 10kohms*
3	○	Audio output A (left)	Standard level:0.5Vrms Output impedance:less than 1kohm*
4	○	Ground (audio)	
5	○	Ground (blue)	
6	○	Audio input A (left)	Standard level:0.5Vrms Input impedance:More than 10kohms*
7	○	Blue input	0.7V±3dB, 75ohms, positive
8	○	Function select (AV control)	High state (9.5—12V):Part mode Low state (0—2V):TV mode Input impedance:More than 10kohms Input capacitance:Less than 2nF
9	○	Ground (green)	
10	○	Open	
11	○	Green	Green signal:0.7V±3dB, 75ohms, positive
12	○	Open	
13	○	Ground(red)	
14	●	Ground (blanking)	
15	○	Red input	0.7V±3dB, 75ohms, positive
	—	(S signal) croma input	0.3V±3dB, 75ohms, positive
16	○	Blanking input (Ys signal)	High state (1—3V) Low state (0—0.4V) Input impedance:75ohms
17	○	Ground (video output)	
18	○	Ground (video input)	
19	○	Video output	1V±3dB, 75ohms, positive Sync:0.3V(-3, +10dB)
20	○	Video input	1V±3dB, 75ohms, positive Sync:0.3V(-3, +10dB)
	—	Video Input/Y (S signal)	1V±3dB, 75ohms, positive Sync:0.3V(-3, +10dB)
21	○	Common ground (plug, shield)	

○ Connected     ● Not Connected (open)     \* at 20Hz - 20kHz

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## CAUTION

SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.

## ATTENTION

APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.

## WARNING !!

AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.

THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.

## ATTENTION !!

AFIN D'EVITER TOUT RISQUE D'ELECTROCUTION PROVENANT D'UN CHASSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISE LORS DE TOUT DEPANNAGE. LE CHASSIS DE CE RECEPTEUR EST DIRECTEMENT RACCORDE A L'ALIMENTATION SECTEUR.

## SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY SHADING AND MARK  ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND, IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

## ATTENTION AUX COMPOSANTS RELATIFS A LA

## SECURITE!!

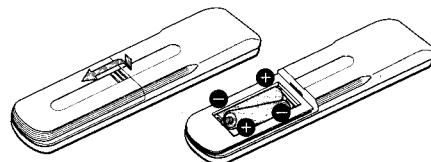
LES COMPOSANTS IDENTIFIES PAR UNE TRAME ET PAR UNE MARQUE  SUR LES VUES EXPLOSEES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SECURITE DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMERO DE PIECE EST INDIQUE DANS LE PRESENT MANUEL OU DANS DES SUPPLEMENTS PUBLIES PAR SONY.

## SECTION 1 GENERAL

### Getting Started

#### Step 1

##### Inserting the Batteries into the Remote Commander



#### Step 2

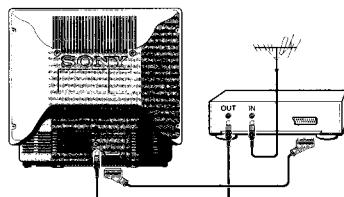
##### Connecting the Aerial

If you connect a VCR, skip to step 3.

Connect an external aerial to the socket **X**.

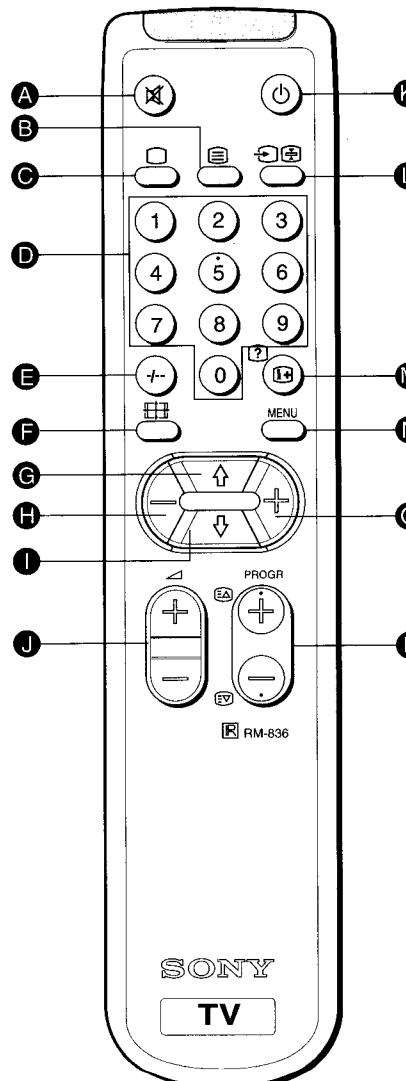
#### Step 3

##### Connecting a VCR



It is recommended to tune in the VCR signal to programme number "0". For details, see "Presetting Channels Manually" on page 12.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.



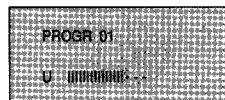
## Step 4

### Presetting Channels Automatically

TV searches for all available channels. If manual tuning is preferred see Menu option - Presetting Channels Manually.

1 Plug into mains.  
Press power switch  W on TV set.

2 Press and hold  S on TV set for 2 seconds.  
Auto tuning starts and screen shows.



**Notes**

- When Auto tuning stops the programme on position 1 is seen.
- KV-M2171U/M2171L only – channels are automatically stored as follows:

KV-M2171U

Programme 1 BBC1  
Programme 2 BBC2  
Programme 3 ITV  
Programme 4 CH4 or S4C  
Programme 5 –  
Programme 6 –

KV-M2171L

RTE1  
RTE2  
BBC1  
BBC2  
ITV  
CH4 or S4C

## TV Operation

### TV Operation

This section explains functions used whilst watching TV. Most operations are carried out using the Remote Commander.

To	Press
Switch on	 W on TV
Switch off temporarily	 K TV is now in standby mode,  indicator V on TV lights.
Switch on again	 C, PROGR +/-,  U or any number button D
Switch off completely	 W on TV To save energy we recommend switching off completely when TV is not in use.
Select programmes	PROGR +/-,  U or number buttons D For double digit numbers press -/- E then the number e.g. For 23, press -/- E then 2 and 3.
Display the programme number	 M Press again to make programme number disappear.
Adjust the volume	 +/-,  T
Mute the sound	 A Press again to restore sound.
View video input	 L, R Press again to return to TV programme.
View programmes in 16:9 mode	 F Press again to return to 4:3 mode.

## Teletext Operation (only for KV-M2171U/M2171L)

### Viewing Teletext

Teletext is an information service broadcast by TV stations.

1 Select the channel which carries the teletext service you wish to receive.

2 Press  to switch on teletext.

3 Input three digits for the page number using the programme number buttons  or PROGR +/- .

4 Press  to switch off teletext.

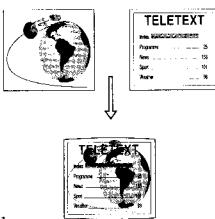
**Note** • Teletext errors may occur if the broadcasting signals are weak.

### Using Other Teletext Functions

#### Superimposing teletext on the TV

Press  once in teletext mode or twice in TV mode to superimpose teletext on the TV screen.

Press  again to cancel superimposing.



#### Freezing a teletext subpage

Press  (HOLD) to freeze the subpage. Freezing the page prevents the information that is displayed from being updated. Press  to cancel HOLD and allow update to continue.



#### Revealing concealed information (eg: answers to a quiz)

Press  to reveal information.

Press again to conceal the information.

#### Using colour buttons to access pages

When the colour coded menu appears at the bottom of a page, press the colour button (red, green, blue or yellow)     to access the corresponding page.

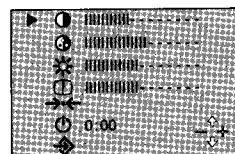
**Note** • A programme status message in a blue box may appear when you change programmes (depends on broadcasters).

## MENU Operation

Use buttons on Remote Commander to control Menu screen.



**MENU**   
Menu Screen  
on/off



Green   
scroll up

Red   
decrease

Yellow   
increase/confirm(OK)

Blue   
scroll down

### Adjusting the Picture

1 Press MENU .

2 Press green  or blue  button to select the item you wish to change.

Symbol	Item	-	Effect	+
	Picture	Less	More	
	Colour	Less	More	
	Brightness	Darker	Brighter	
	Sharpness	Softer	Sharper	

3 Press red  or yellow  button to change levels.

4 Press MENU  to return to normal TV screen.

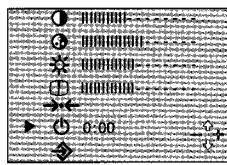
**Note** • To reset to factory preset picture levels, press green  or blue  button to select  and press yellow  (OK) button.

## Using the Sleep Timer

The TV may be set to switch to the standby mode automatically after a length of time chosen by you. You may set the time in 30 minutes steps up to 4 hours.

- 1 Press MENU .

- 2 Press green  or blue  button to select .



- 3 Press red  or yellow  button to set time delay.  
0.00 (OFF) 0.30 1.00 1.30 .... 4.00

- 4 Press MENU  to return to normal TV screen.  
When watching TV, press   to display time remaining.

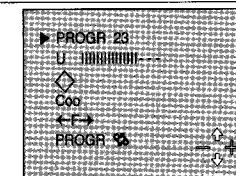
| 6

## Presetting Channels Manually

Up to 60 programme positions are available for presetting channels.

- 1 Press MENU .

- 2 Press green  or blue  button to select  and press yellow (OK) .



- 3 Select programme number using PROGR +/-   or the number buttons .

- 4 Press green  or blue  button to select tuning bar (|||||....) and press red  or yellow  button to start channel search.  
When a channel is found the tuning bar stops moving and you see the picture.

- 5 If you want to store, press green  or blue  button to select  and press yellow (OK)  button. If you do not want to store, press red  or yellow  button to continue search.

- 6 Repeat steps 3 to 5 for all other channels.

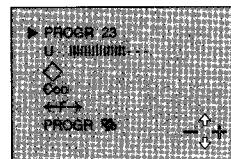
- 7 Press MENU  to return to normal TV screen.

## Skipping Programme Positions

You can skip unused programme positions when selecting channels with the PROGR +/-  buttons. You can still select them, however, using the number buttons .

- 1 Press MENU .
- 2 Press green  or blue  button to select  and press yellow  button.
- 3 Select programme number you want to skip using PROGR +/-  button or number buttons .
- 4 Press green  or blue  button to select Coo and press yellow (OK)  button.
- 5 Press green  or blue  button to select  and press yellow (OK)  button to store.
- 6 Repeat steps 3 to 5 for other unused programme positions.
- 7 Press MENU  to return to normal TV screen.

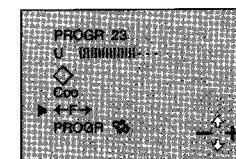
**Note** • To restore a skipped programme number, refer to "Presetting Channels Manually".



## Fine-Tuning Channels

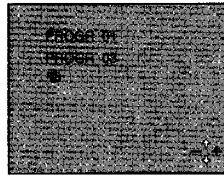
You can fine tune a stored channel if necessary.

- 1 Select the channel you wish to fine tune.
- 2 Press MENU .
- 3 Press green  or blue  button to select  and press yellow (OK)  button.
- 4 Press green  or blue  button to select  and use red  or yellow  button to adjust tuning.
- 5 Press green  or blue  button to select  and press yellow (OK)  button to store.
- 6 Press MENU  to return to normal TV screen.



## Exchanging Programme Positions

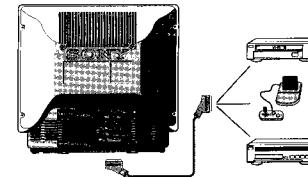
After tuning you may wish to rearrange the programme positions.

- 1 Press MENU .
- 2 Press green  or blue  button to select  and press yellow (OK)  button.
- 3 Press green  or blue  button to select PROGR  and press yellow (OK)  button.  

- 4 Press red  or yellow  button to select the first programme position.
- 5 Press the blue  button.
- 6 Press the red  or yellow  button to select the second programme position.
- 7 Press blue  button to select  and press yellow (OK)  button to exchange.
- 8 Repeat steps 4 to 7 for other programme positions.
- 9 Press MENU  to return to normal TV screen.

## Optional Connections

### Using the 21-pin Connector

Your TV has one 21-pin connector  on the rear of the set. You can connect optional audio or video equipment to this connector, such as a VCR, video games or a video disc player.



- 1 Press   to view the video input signal.
- 2 Press   or  to return to normal TV screen.

### Connecting Headphones

Plug in the headphones to the  socket on the front of the TV set, then the sound from the speaker is muted.

## Troubleshooting

Here are some simple solutions to the problems which affect the picture and sound.

Problem	Solution
No picture, screen is dark, no sound	<ul style="list-style-type: none"> <li>• Plug the TV in.</li> <li>• Press <b>W</b> on the TV.</li> <li>• Press <b>□ C</b> or the programme number <b>D</b> on the remote commander if <b>W</b> indicator <b>V</b> is on.</li> <li>• Check the aerial connection.</li> <li>• Check that the video source is on.</li> <li>• Turn the TV off for 3 or 4 seconds and then turn it on again using <b>W</b>.</li> </ul>
Poor or no picture (screen is dark, sound is good)	<ul style="list-style-type: none"> <li>• Press MENU <b>N</b> and adjust brightness picture and colour levels.</li> </ul>
Good picture, no sound	<ul style="list-style-type: none"> <li>• Adjust the volume <b>+/ - T</b>.</li> <li>• Disconnect any headphones.</li> <li>• Press <b>W A</b> if <b>W</b> is displayed on the screen.</li> </ul>
No colour on colour programmes	<ul style="list-style-type: none"> <li>• Press MENU <b>N</b> and adjust colour balance.</li> <li>• Press MENU <b>N</b> and reset to factory settings.</li> </ul>
Distorted picture when you change programmes or select teletext	<ul style="list-style-type: none"> <li>• Turn off the equipment connected to the 21-pin connector <b>Y</b>.</li> </ul>
Remote commander does not function	<ul style="list-style-type: none"> <li>• Replace the batteries.</li> </ul>

- If you continue to have these problems, have your TV serviced by qualified personnel.
- NEVER open the casing yourself.

## Specifications

### TV system

I

### Colour system

PAL

### Channel coverage

KV-M2170L/M2171L  
UHF 21-69  
VHF A-J  
Hyper S1-S41  
KV-M2170U/M2171U  
UHF 21-69

### Picture tube

HiBlack Trinitron  
Approx 54.5 cm (21 inches) (Approx 51 cm picture measured diagonally)

### Inputs

21-pin connector (CENELEC standard)  
including audio/video input, RGB input

### Outputs

Headphone jack - minijack

### Sound output:

4W (RMS)  
5W (music power)

### Power consumption

75W

### Dimensions (wxhxd)

513x475x475mm approx.

### Weight

21 kg

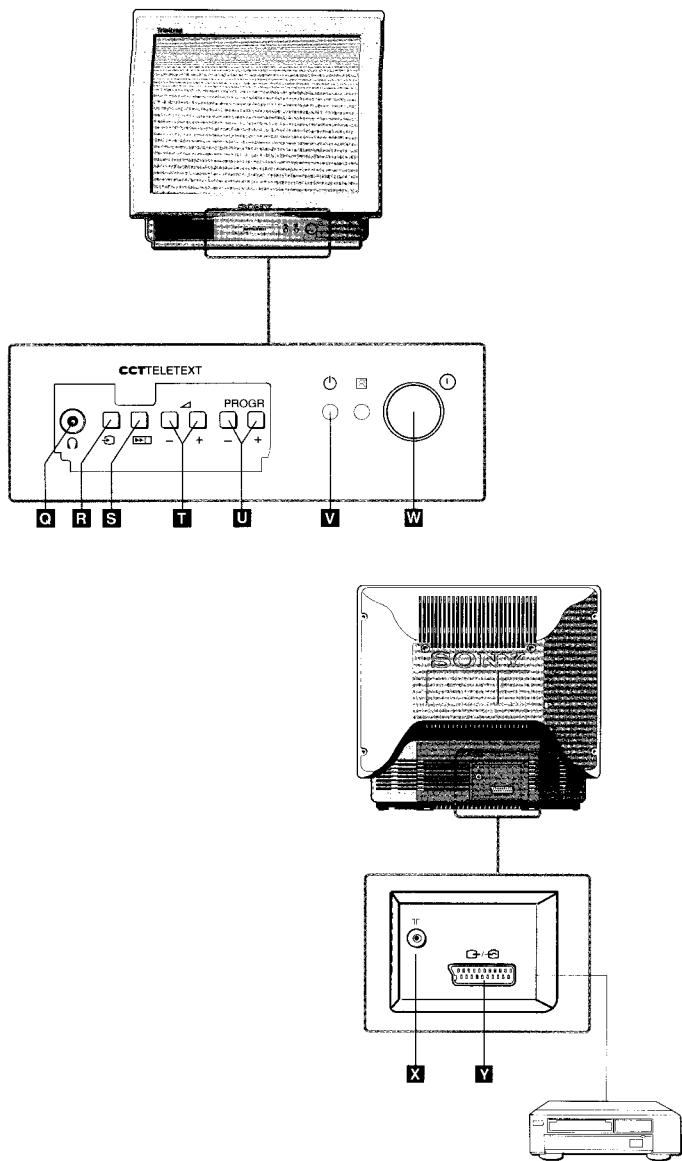
### Accessories supplied

RM-836 Remote Commander (1)  
IEC designated batteries (2)

### Other features

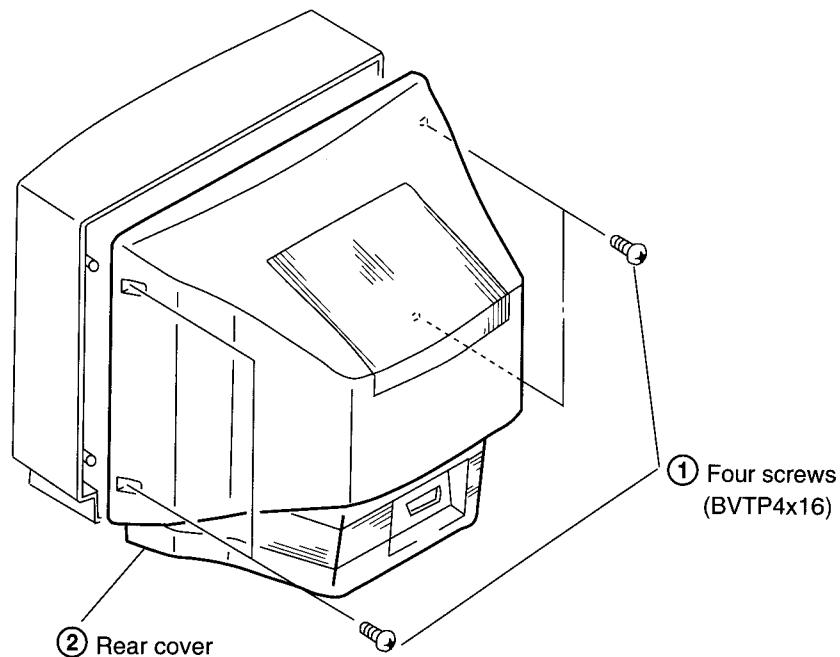
TELETEXT (for KV-M2171U/M2171L)

- Design and specifications are subject to change without notice.

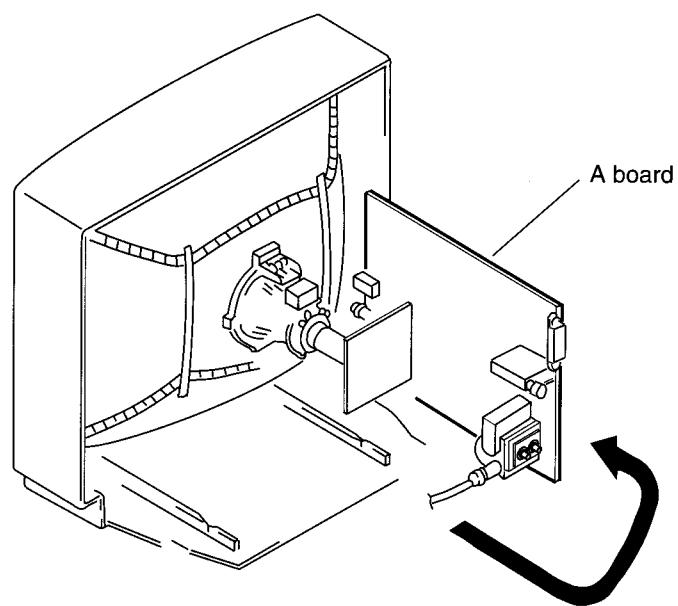


## SECTION 2 DISASSEMBLY

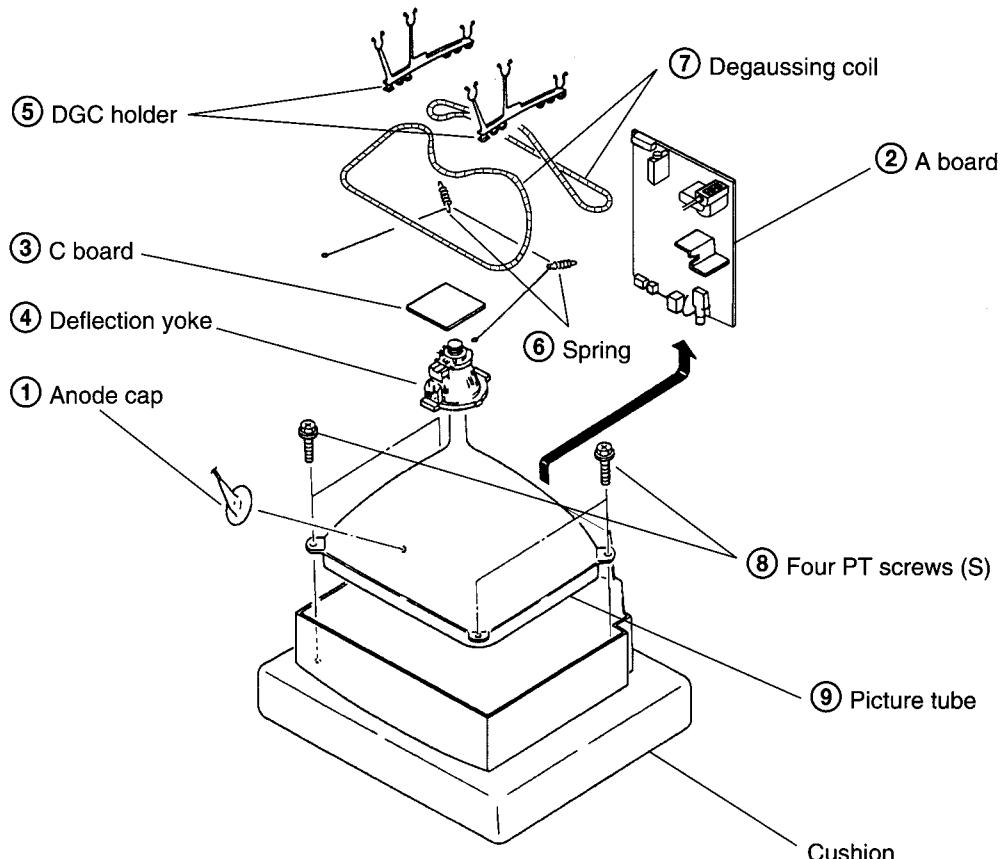
### 2-1. REAR COVER REMOVAL



### 2-2. SERVICE POSITION



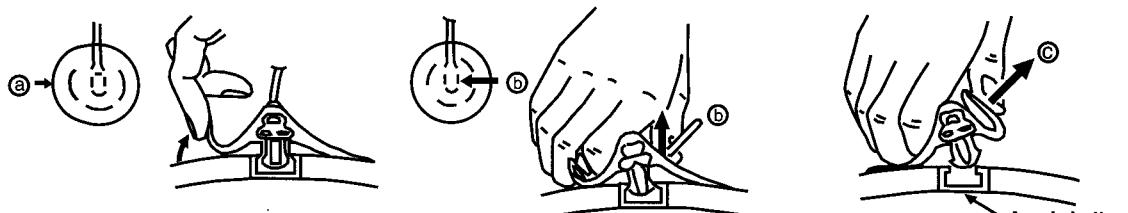
## 2-3. PICTURE TUBE REMOVAL



### • REMOVAL OF ANODE-CAP

**Note:** Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

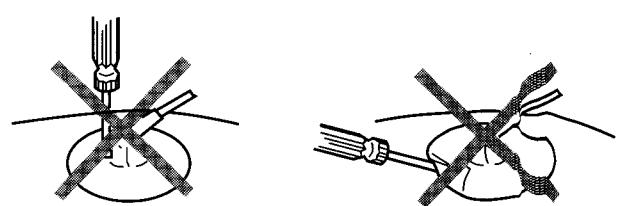
#### \* REMOVING PROCEDURES.



- ① Turn up one side of the rubber cap in the direction indicated by the arrow (a)
- ② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow (b)
- ③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling it up in the direction of the arrow (c)

### • HOW TO HANDLE AN ANODE-CAP

- ① Don't damage the surface of anode-cap with sharp shaped material !
- ② Don't press the rubber hardly not to hurt inside of anode-caps !  
A metal fitting called as shatter-hook terminal is built into the rubber.
- ③ Don't turn the foot of rubber over hardly !  
The shatter-hook terminal will stick out or damage the rubber.



## SECTION 3

### SET-UP ADJUSTMENTS

- The following adjustments should be made when a complete realignment is required or a new picture tube is installed.
- These adjustments should be performed with the rated power supply voltage, unless otherwise noted.

The Contrast and Brightness controls should be set as follows unless otherwise noted:

CONTRAST control ..... 80%  
(or Normal by commander)  
BRIGHTNESS control ..... 50%

Perform the adjustments in the following order:

- Beam Landing
- Convergence
- Screen (G2), Drive, White Balance, Sub Colour and Sub Brightness.
- Focus

**Note:** Test Equipment Required.

- Colour bar/Pattern Generator
- Degausser
- DC Power Supply
- Digital multimeter
- Oscilloscope

#### Preparation:

- In order to reduce the influence of external magnetic forces on the picture tube, face the TV set in an easterly or westerly direction.
- Turn the power switch for the unit ON and erase the magnetic force using a degausser.

#### 3-1. BEAM LANDING

Demagnetize with a degausser.

- Input an all white raster signal from the pattern generator.  
CONTRAST } normal  
BRIGHTNESS }
- Switch the raster signal of the pattern generator to Red.
- Move the deflection yoke backward, and adjust with the purity control so that Red is at the centre and the Blue and Green are evenly spaced at the sides. see (Fig. 3-1 - 3-3)
- Move the deflection yoke forward, and adjust so that the entire screen becomes Red. (Fig. 3-1)
- Switch the raster signal to Blue and then Green to confirm the condition.
- When the position of the deflection yoke has been determined, tighten it with the deflection yoke mounting screw.
- When the landing at the corners is not correct, adjust by using disk magnets. (Fig. 3-4)

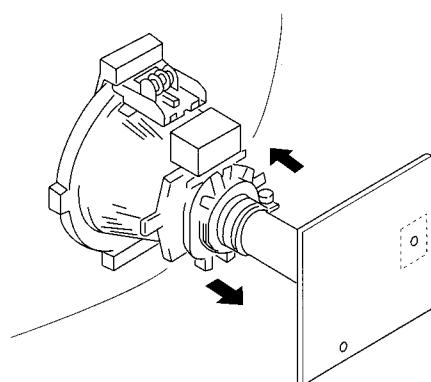


Fig. 3-1

Fig. 3-2

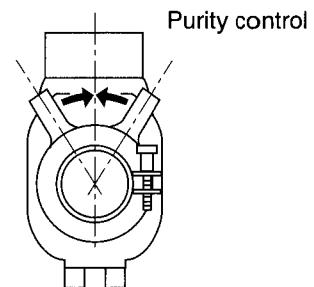


Fig. 3-3

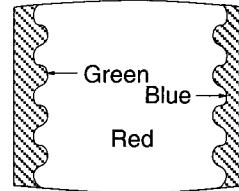
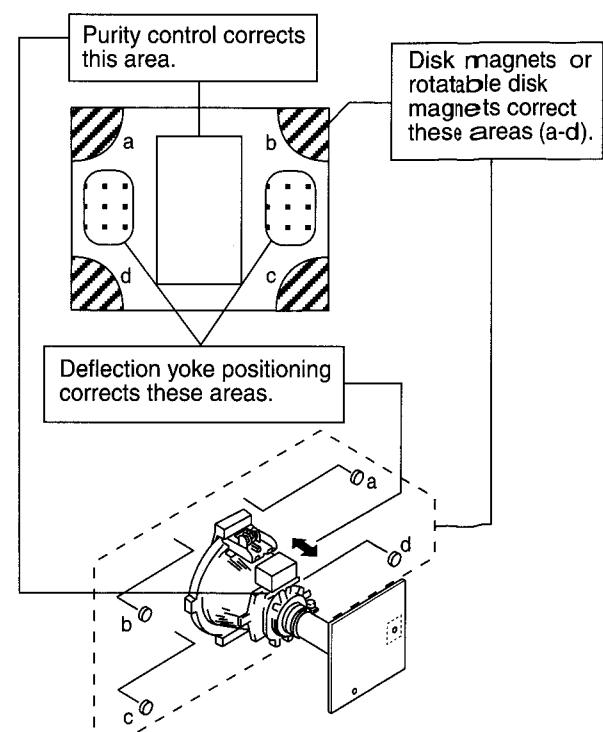


Fig. 3-4

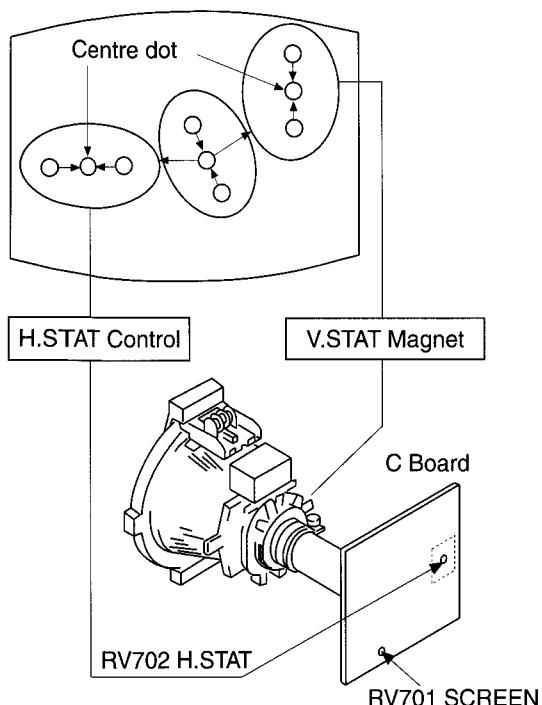


## 3-2. CONVERGENCE

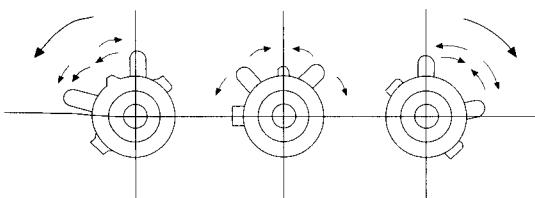
### Preparation:

- Before starting, perform FOCUS, H.SIZE, and V.SIZE adjustments.
- Set the BRIGHTNESS control to minimum.
- Input a dot pattern from the pattern generator.

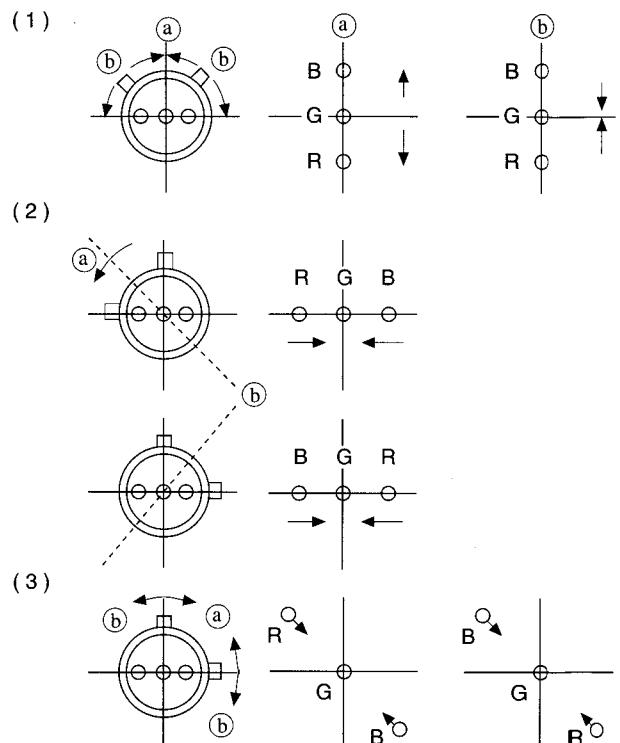
### (1) Horizontal and Vertical Static Convergence



- Adjust the H.STAT control to converge the Red, Green and Blue dots at the centre of the screen. (Horizontal movement)
- Adjust the V.STAT magnet to converge the Red, Green and Blue dots at the centre of the screen. (Vertical movement)
- If the horizontal dots cannot coincide with variable range of the H.STAT convergence, adjust together with the V.STAT convergence while tracking.  
(Adjust the convergence by tilting the V.STAT convergence or by opening or closing the V.STAT convergence.)



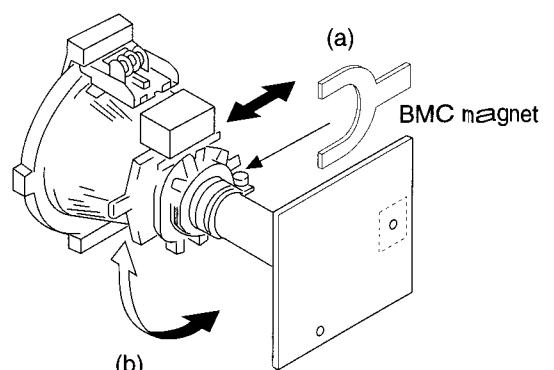
- When the V.STAT magnet is moved in the direction of the (a) and (b) arrows, the Red, Green and Blue dots move as shown below.



If the Red and Blue dots do not converge with the Green dots, perform the following steps.

- Move the BMC magnet (a) to correct for insufficient H.static convergence.
- Rotate the BMC magnet (b) to correct for insufficient V.static convergence.

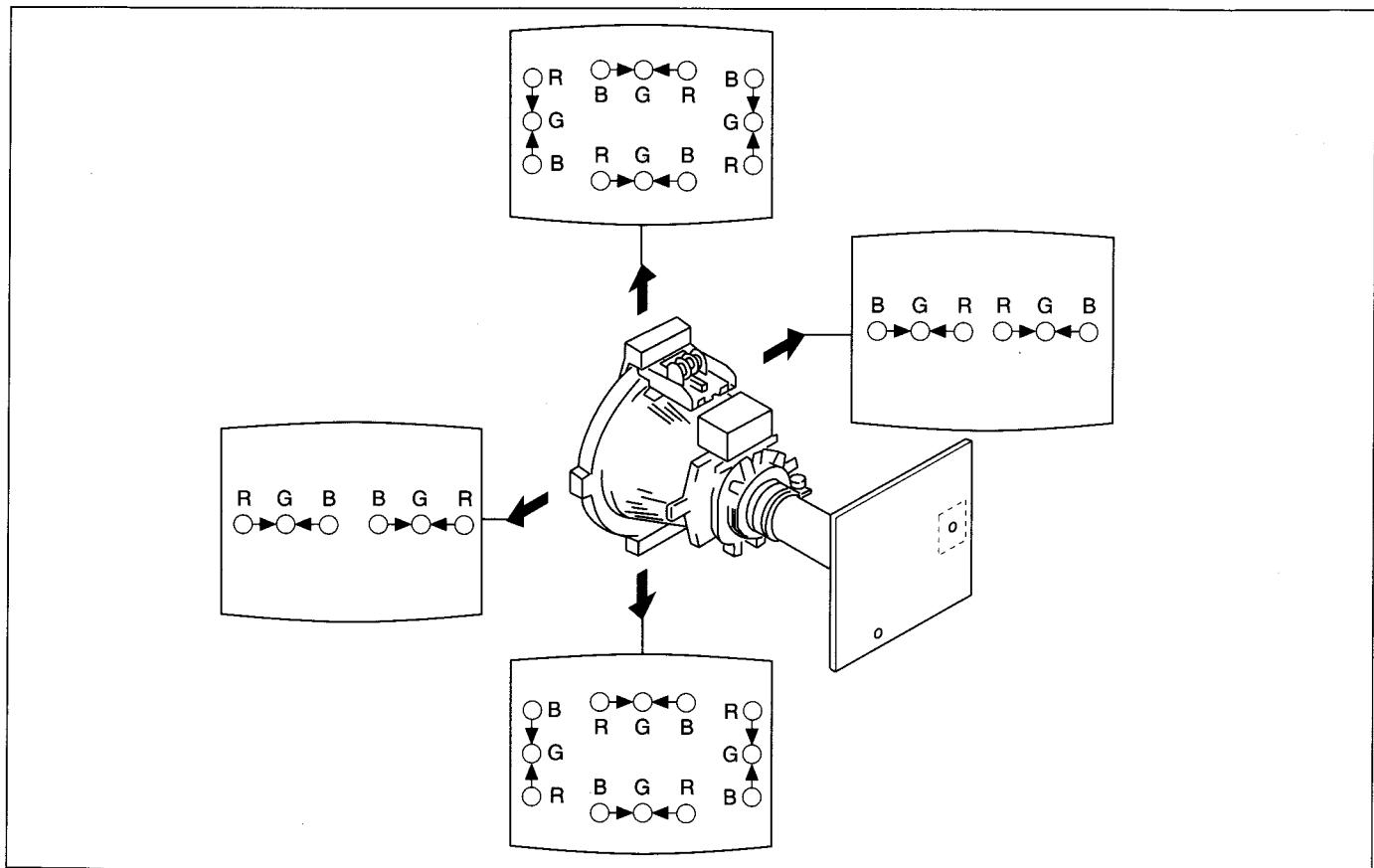
In either case, repeat the Beam Landing Adjustment.



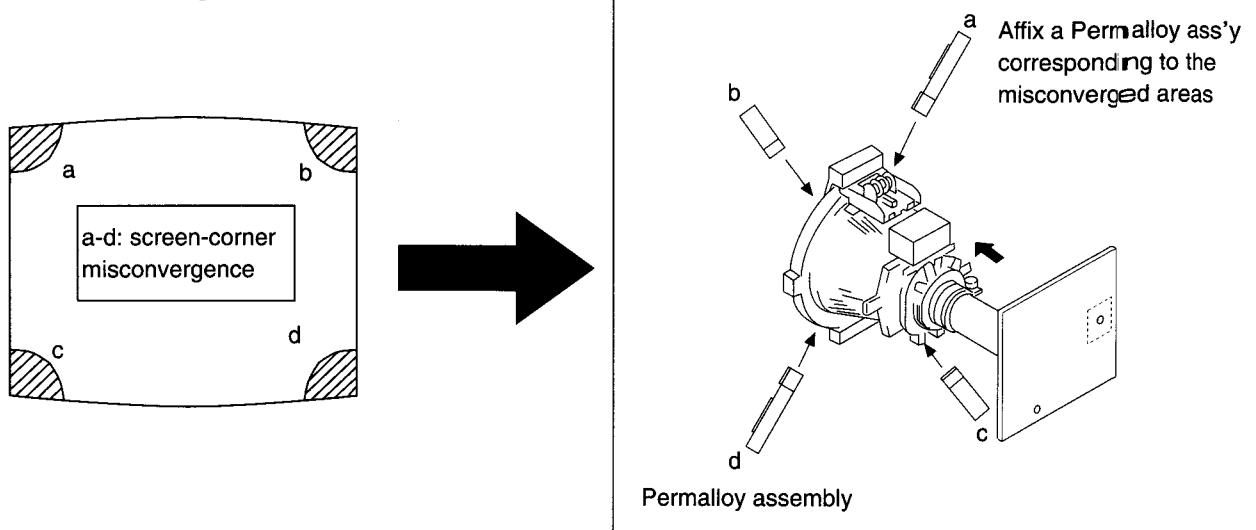
## (2) Dynamic Convergence Adjustment

### Preparation:

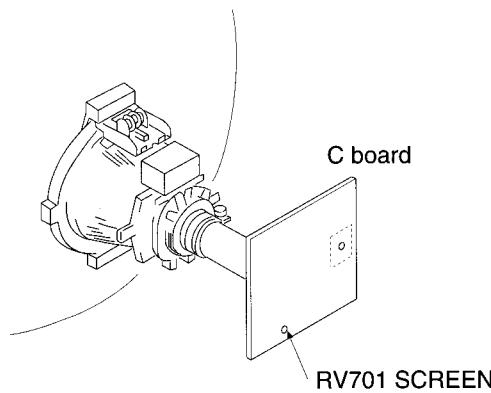
- Before starting to perform the Horizontal and Vertical static convergence adjustment.
- 1. Slightly loosen the deflection yoke screw.
- 2. Remove the deflection yoke spacers.
- 3. Move the deflection yoke for best convergence as shown below.
- 4. Tighten the deflection yoke screw.
- 5. Install the deflection yoke spacers.



## (3) Screen-corner Convergence.



### 3-3. SCREEN(G2), DRIVE, WHITE BALANCE, SUB COLOUR and SUB BRIGHTNESS.

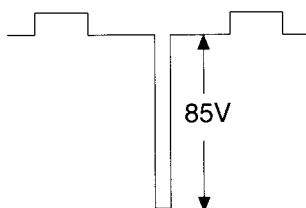


#### Screen (G2) setting

1. Input a 0 IRE (Black Level) signal from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 38.
3. Adjust RV701 until the Down arrow is displayed.
4. Adjust RV701 until the Down arrow just disappears.
5. Press the TV Button on the Remote Commander to store the data.

#### Drive Level

1. Input a Video signal containing a small area of 100% white on a black background.
2. Connect an oscilloscope to Pin (10) of J701 (R OUT) on the C Board.
3. Set the Picture to maximum using "Test""Test" and 01.
4. Enter into the Service mode (Adjust Menu).
5. Using the Blue and Green buttons select "RED HWB".
6. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform has an amplitude of 85V.

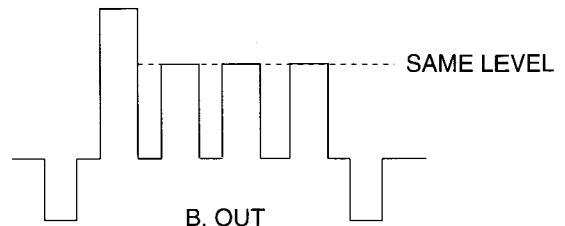


#### White Balance Adjustment

1. Input an all white pattern from the pattern generator.
2. Adjust the Colour and Brightness controls to the standard level.
3. Enter into the Service Mode.
4. Adjust the Green HWB and Blue HWB so that the White Balance becomes optimum.

#### Sub Colour Adjustment

1. Input a PAL colour bar pattern from the pattern generator.
2. Connect an oscilloscope to Pin (8) of J701 (B OUT) on the C Board.
3. Enter into the Service Mode "Test""Test" and 22.
4. Using the Red and Yellow buttons on the Remote Commander adjust until the oscilloscope waveform becomes as follows :



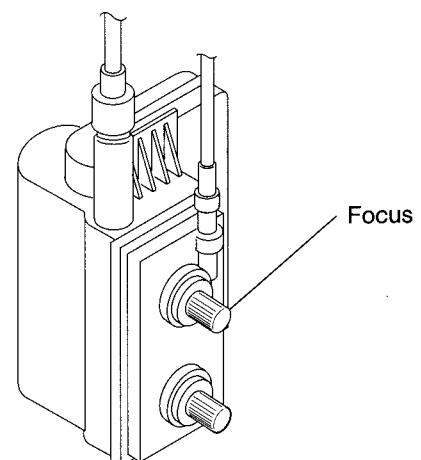
**Note :** If the TV is able to receive PAL and SECAM transmissions, repeat the above procedure using a Secam colour bar signal.

#### Sub Brightness Adjustment

1. Input a Philips pattern from the pattern generator.
2. Enter into the Service Mode "Test""Test" and 23.
3. Using the Red and Yellow buttons on the Remote Commander adjust until the 0 IRE of the grey scale and the cut off are only slightly visible on the screen.

### 3-4. FOCUS

1. Receive a television broadcasting.
2. Normalize the picture setting.
3. Adjust the focus control on the flyback transformer to become the focus in the centre area properly. Bring only the centre area of the screen into focus, the magenta-ring appears on the screen. In this case, adjust the focus to optimize the screen uniformly.



## SECTION 4

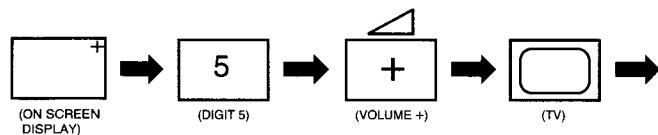
### CIRCUIT ADJUSTMENTS

#### 4-1. ELECTRICAL ADJUSTMENTS

Service adjustment to this model can be performed with the supplied Remote Control Commander RM-836.

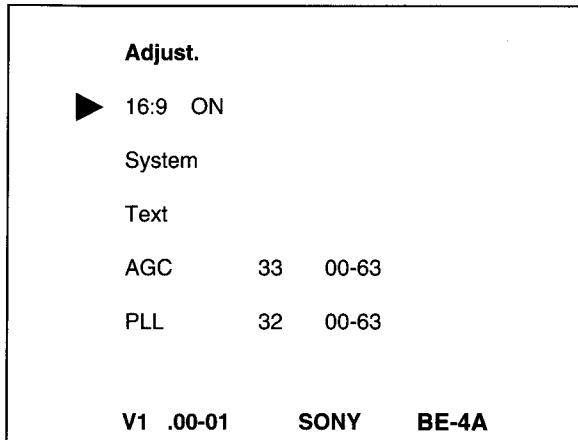
##### HOW TO ENTER INTO SERVICE MODE

1. Turn on the main power of the set and enter into stand-by mode.
2. Press the following sequence of buttons on the Remote Control Commander.



"TT--" will appear in the top right corner of the screen  
Other status information will also be displayed.

3. Press the MENU button on the Remote Commander to obtain the menu on the screen.



Software version

4. Press the Blue (Next) or Green (previous) buttons to select the adjustment item from the table.
5. Press the Yellow (+) or Red (-) buttons to change the data as required.
6. Turn off the power to quit the service mode when adjustments are completed.

Range of adjustments available from the on screen menu system.

Adjustment	Set	Range
16:9 Off	Select	ON/OFF
System	Select	BG-L, BG-DK UK, Eire, BG
Text	Select	EAST/WEST
AGC	Adj.	00 - 63
PLL	Adj.	00 - 63
B&W Delay	Adj.	00 - 63
Ver Size	Adj.	00 - 63
Ver, Breath	00	00 - 63
Par, Ampl	00	00 - 63
Par, Tilt	32	00 - 63
V, Linear	Adj.	00 - 63
Corn, corr	00	00 - 63
V, Cen or EW	Adj.	00 - 63
V, Position	42	00 - 63
H, Centre	Adj.	00 - 63
Blue HWB	Adj.	00 - 63
Green HWB	Adj.	00 - 63
Red HWB	Adj.	00 - 63

## 4-2. TEST MODE 2:

TT -- Mode is available by pressing the Test button twice, O.S.D 'TT --' appears. The functions described below are available by pressing two digits. To release the 'TT --' mode, press 0 twice, press 'TEST' , press 'TV' or switch the TV into Stand-by mode.

00	Switch 'TT--' Mode off.
01	Set picture level to maximum.
02	Set picture level to minimum.
03	Set volume to 35%.
04	Set volume to 50%.
05	Set volume to 65%.
06	Set volume to 80%.
07	Ageing condition (picture max., brightness max.).
08	Shipping condition (Analog values are RESET to factory setting, Prog 1 is selected, TT--mode switched off, Vol = 35%).
09	Dummy.
10	No function.
11	Dummy
12	Text Picture Level Offset (Enable/Disable)
13	Select Odd / Even field for Non-interlaced teletext.
14	Select Interlaced / Non-interlaced teletext display.
15	Read factory setting from ROM to NVM - Reads Volume, Brightness, Picture, Hue, Sharpness and Colour values from ROM to the actual used values (Last Power Memory).
16	No function
17	Enable / Disable Sharpness Operation.
18	Enable / Disable Teletext Operation.
19	Enable / Disable NTSC Operation.
20	No function.
21	Sub Picture.
22	Sub Colour (Pal / Secam Different Stores)
23	Sub Brightness.
24	Destination System BG/L.

25	Destination Systems BG/L.
26	Destination Systems I.
27	Destination System I/I'.
28	Destination BG only.
29	Dummy.
30	No function.
31-32	Dummy.
33	Auto AGC Adjust.
34	Auto PLL Adjust.
35-37	Dummy.
38	Enter G2 adjustment mode.
39	Dummy.
40	No function.
41	Re-initialise NVM.
42	Dummy.
43	Re-initialise Geometry settings.
44-47	Dummy
48	Set NVM testbyte to 44h in NVM.
49	Erase NVM testbyte
50	No function.

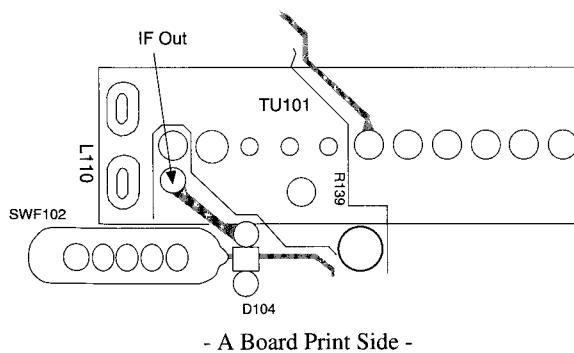
**Note :** For Test Modes 41 - 50, it is necessary to ensure that the TV is set to Prog 59.

## IF ADJUSTMENT (AUTOMATIC)

1. Input a 38.9 MHz 100dB $\mu$  CW signal at the IF Out injection point.
2. Enter into service mode and press 34.
3. Connect a digital voltmeter to IC101 pin (23).
4. Check AFT 2.5V  $\pm$ 0.3V dc.
5. Press '00' on the Remote Commander.

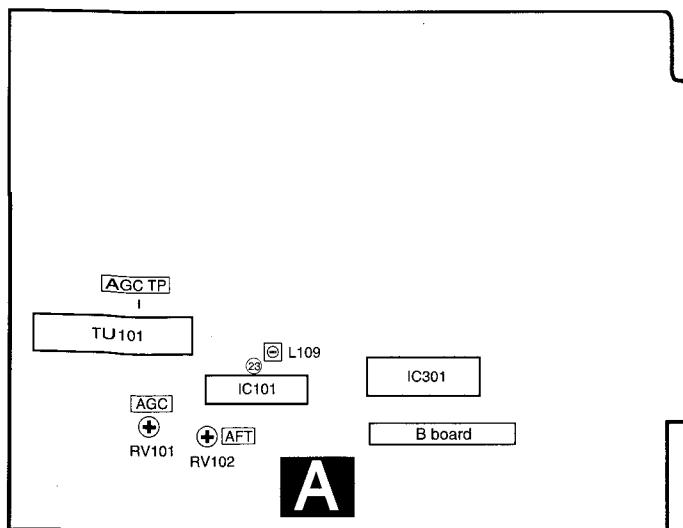
SYSTEM L ADJUSTMENT  
( Italian, French, AEP, Spanish Models)

1. Input a 33.9MHz 100dB $\mu$  CW signal at the IF Out injection point.
2. From the On Screen Menu set System to L band 1.
3. Connect a digital voltmeter to IC101 pin (23).
4. Adjust RV102 AFT for 2.5V  $\pm$ 0.3V dc.



## AGC ADJUSTMENT

1. Receive an off-air signal.
2. Enter into the Service adjust menu and select AGC.
3. Adjust the data using the Red and Yellow buttons on the Remote Commander so that there is no snow or cross - modulation visible on the screen.
4. Change the receiving off-air channel, and confirm the above status.



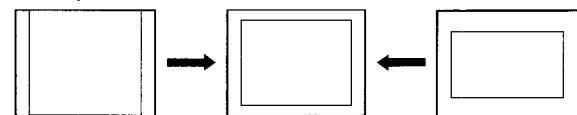
## DEFLECTION SYSTEM ADJUSTMENT

1. Enter into the service mode.
2. Using the Blue or Green buttons select the Adjust item.
3. Press the Yellow button to enter the adjustment submenu.
4. Select and adjust each item in order to obtain the optimum image.

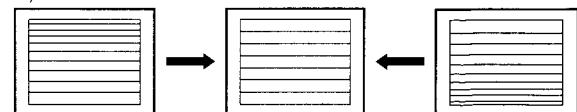
See Note on page 23

Adjustment	Set	Range
VERT, AMPL	Adj.	00 - 63
VER, BREATH	00	00 - 63
PAR, AMPL	00	00 - 63
PAR, TILT	32	00 - 63
V, LINEAR	Adj.	00 - 63
CORN, CORR	Adj.	00 - 63
V, CENTRE	Adj.	00 - 63
V, POSITION	42	00 - 63
H, CENTRE	Adj.	00 - 63

## VERT, AMPL



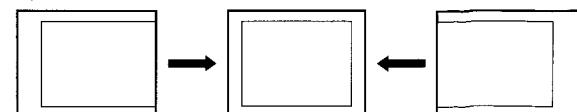
## V, LINEAR



## V, CENTRE



## H, CENTRE



Fit the link as required to obtain the correct horizontal picture size.

### 4-3. BE-4A SELF DIAGNOSTIC SOFTWARE

The identification of errors within the BE-4A chassis is triggered in 1 of 2 ways :- 1: Bus busy or 2: Device failure to respond to I<sup>2</sup>C. In the event of one of these situations arising the software will first try to release the Bus if busy (Failure to do so will report with a continuous flashing LED) and then communicate with each relevant device in turn to establish if a device is faulty. If a device is found to be faulty the relevant device number will be displayed through the LED by a Series of flashes which must be counted (See Table 1), Non fatal errors are reported with this method.

If a fatal error is found, the set will simply stay in whichever state it was when the error occurred, but if a non fatal error occurs the set will try to continue to operate.

**Table 1**

No of Flashes	Meaning
2	IC301 not acknowledging I <sup>2</sup> C transmission, NVM OK.
3	IC301 FAULT (Not OK) - flags
4	IC301 - No H Flyback
5	IC301 - Stack Overflow.
6	Overvoltage / Overcurrent Protection (Pin 52) high.
7	IC002 not acknowledging I <sup>2</sup> C transmission, IC301 OK.
8	IC002 and IC301 - No I <sup>2</sup> C acknowledgment.
9	General I <sup>2</sup> C Error (SDA or SCL being held low) (IC301, IC001, IC002, CN001)

Flash Timing Example : e.g. error number 3

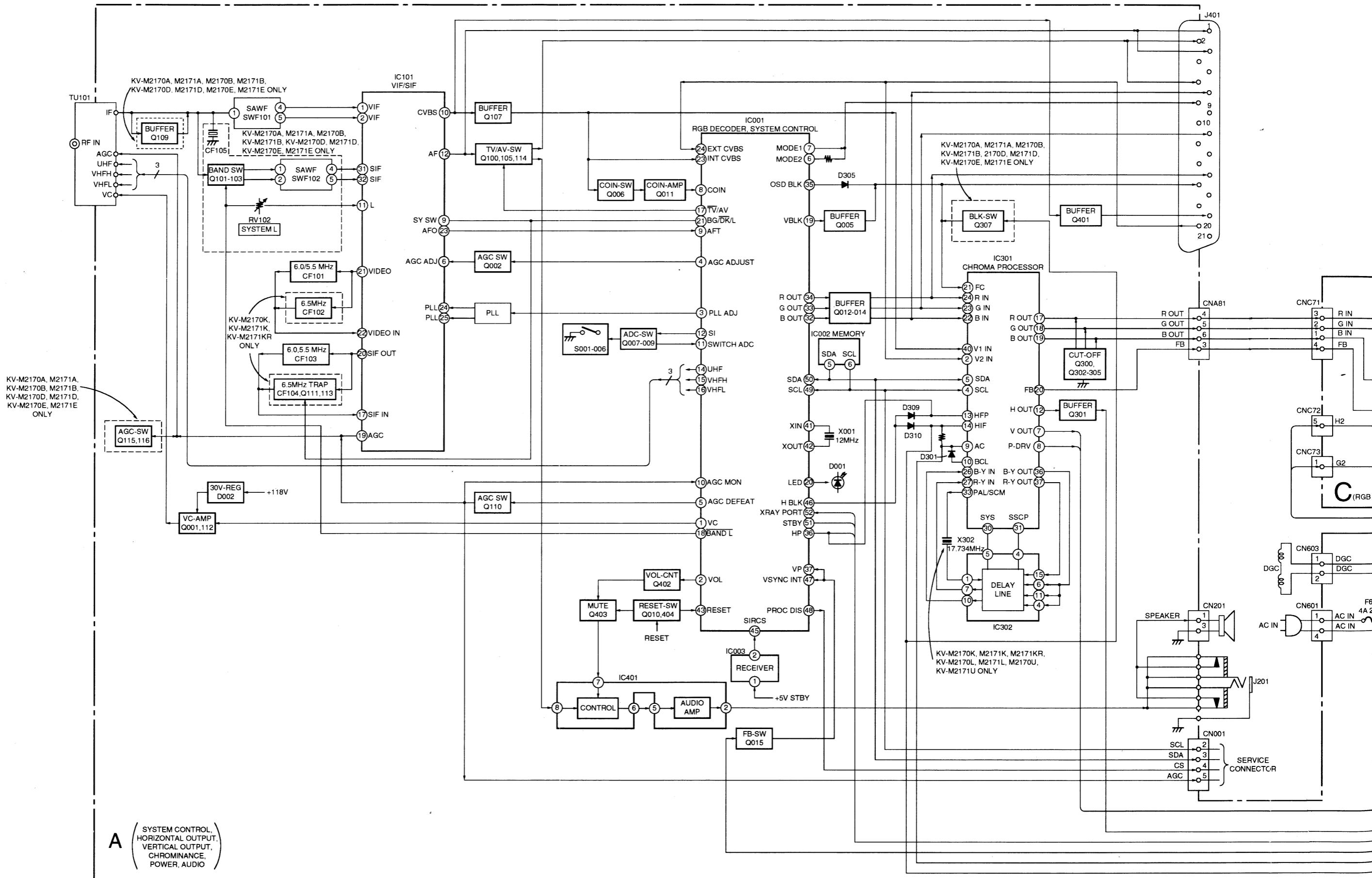
Stby LED

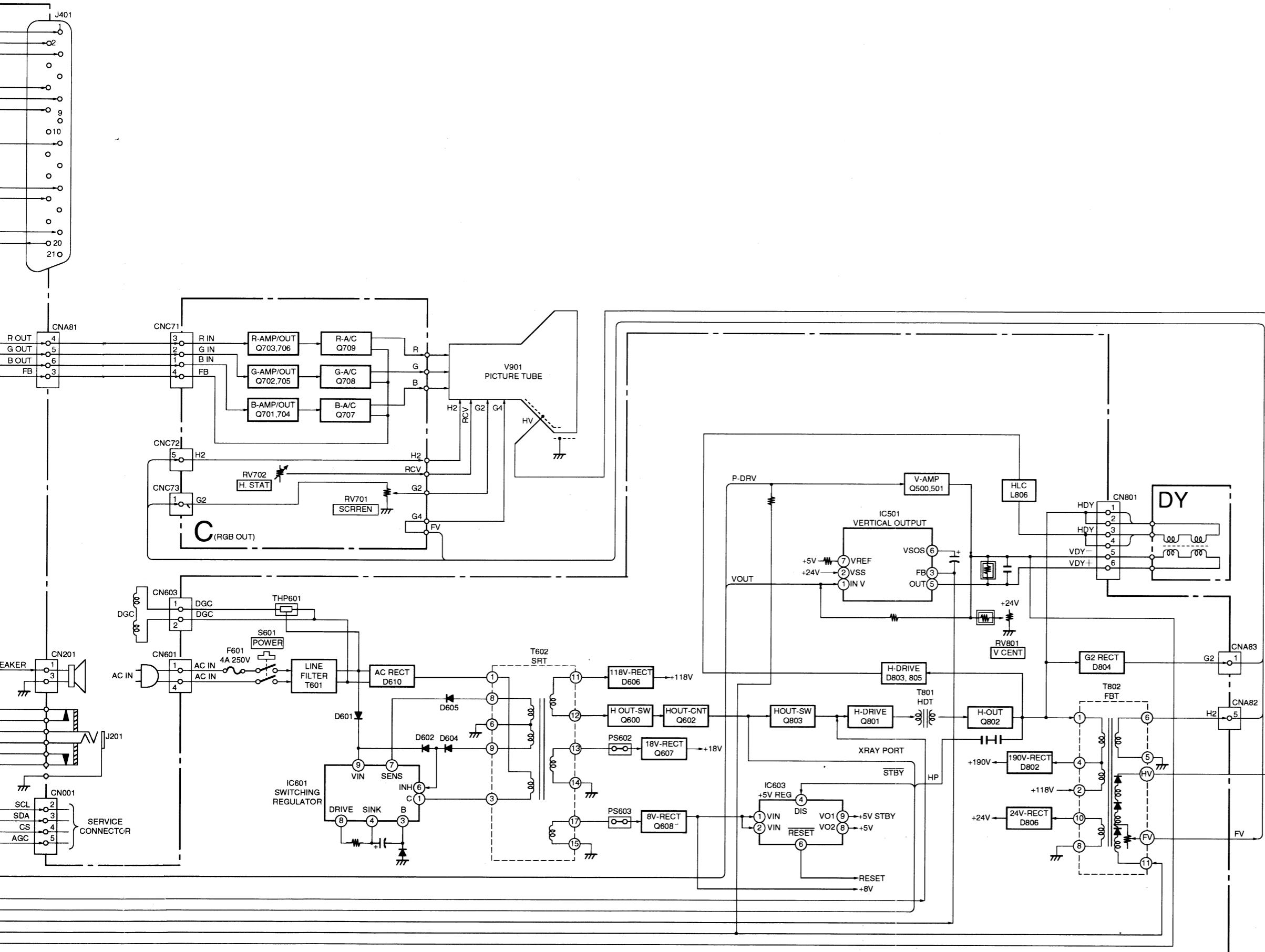


**Note :** Deflection System Adjustments should not be carried out whilst using an NTSC (60Hz) signal, or if the signal is unlocked.

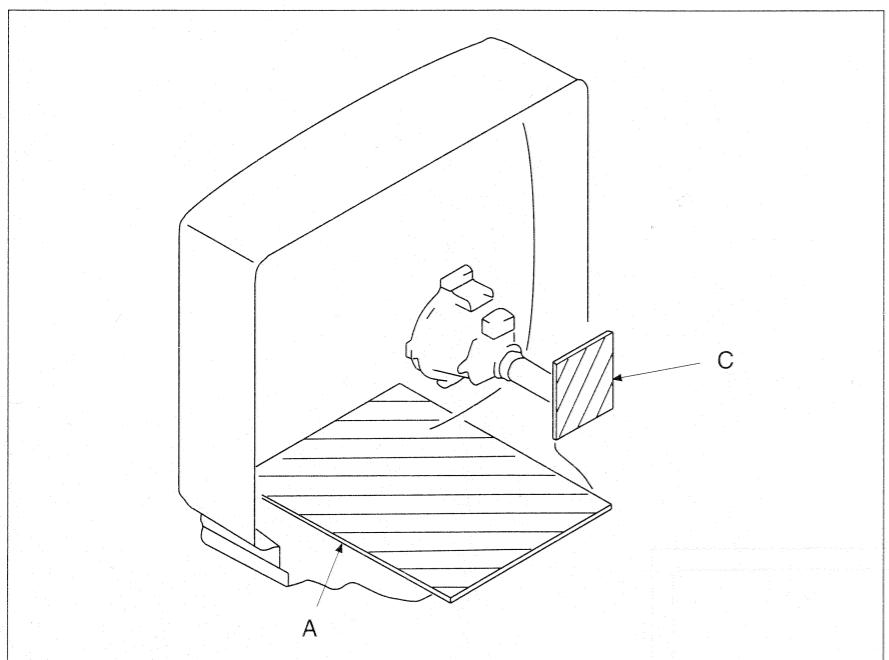
## SECTION 5 DIAGRAMS

### 5-1. BLOCK DIAGRAM





## 5-2. CIRCUIT BOARDS LOCATION



## 5-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

### Note :

- All capacitors are in  $\mu\text{F}$  unless otherwise noted.  $\text{pF}$ :  $\mu\mu\text{F}$   
 50WV or less are not indicated except for electrolytic and tantalums.
- All resistors are in ohms.  
 $k = 1000$  ,  $M = 1000\text{K}$
- Indication of resistance, which does not have one for rating electrical power, is as follows.

Pitch : 5 mm

-  : nonflammable resistor.
-  : internal component.
-  : panel designation, or adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
-  : earth - ground.
-  : earth - chassis.
-  : no mounted.

**Note :** The components identified by shading and marked **A** are critical for safety. Replace only with the part number specified.

**Note :** Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

**— A BOARD —**

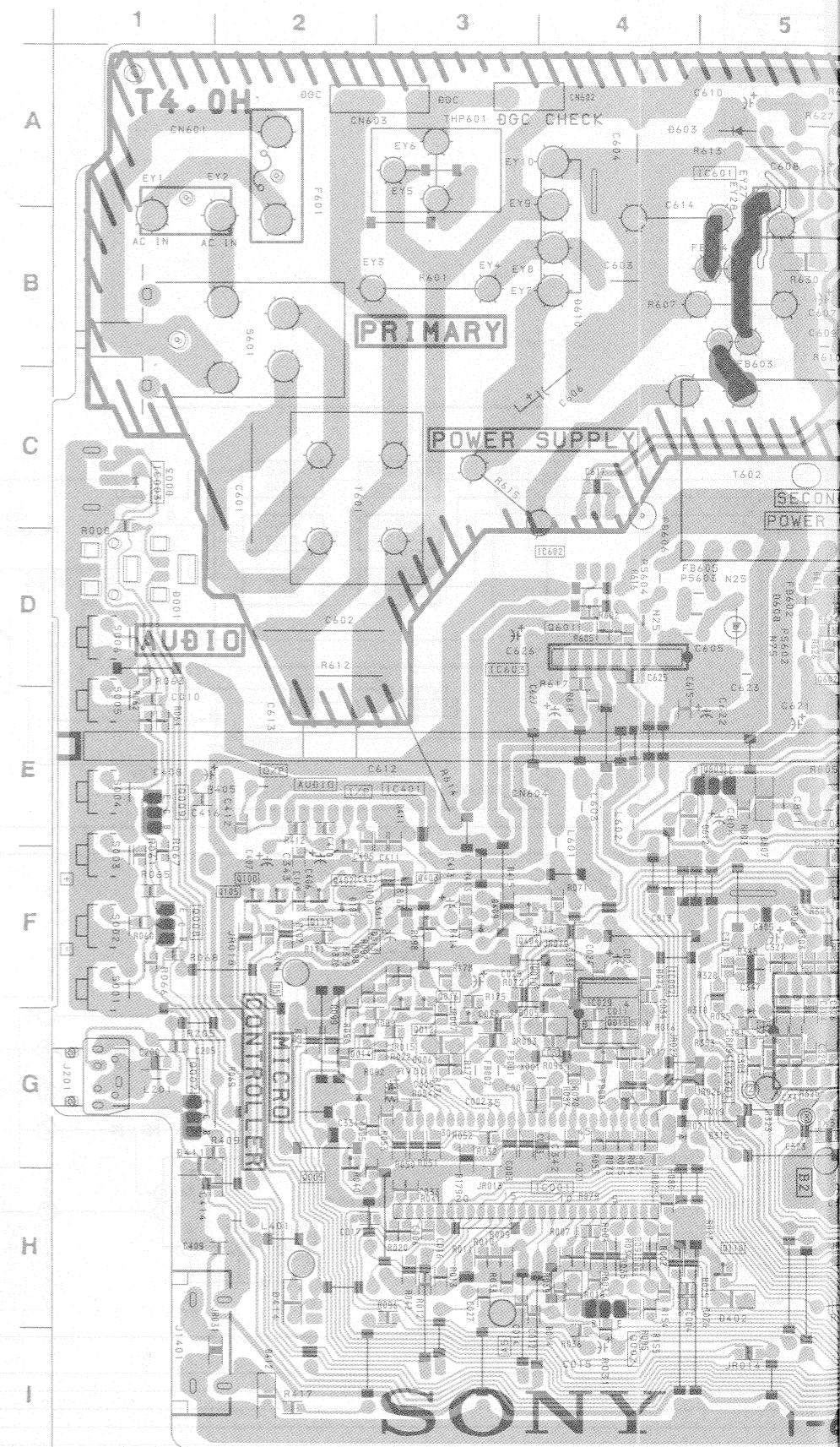
IC		Q114	F-2	D305	G-2
IC001	H-4	○ Q115	F-10	○ D307	G-11
IC002	G-4	○ Q116	F-9	○ D308	F-8
IC003	C-1	Q300	F-7	D401	H-12
IC101	G-10	Q301	F-6	D402	H-5
IC301	G-5	Q302	F-7	D403	H-12
IC302	H-7	Q303	G-7	D404	H-12
IC401	E-3	Q304	F-7	D405	H-12
IC501	D-9	Q305	G-7	D406	H-11
IC601	A-5	Q306	G-8	D407	G-12
IC603	D-3	○ Q307	F-8	D408	I-12
TRANSISTOR		Q401	H-10	D409	F-3
		Q402	F-2	D410	I-11
		Q403	F-3	D414	H-2
Q001	H-8	Q404	F-4	D501	E-8
Q002	I-4	Q600	D-6	D600	D-6
Q005	H-2	Q602	D-6	D601	A-6
Q006	H-9	Q801	E-6	D602	B-6
Q007	G-1	Q802	C-9	D603	A-5
Q008	F-1	Q803	E-5	D604	B-6
Q009	E-1	Q804	C-7	D605	B-6
Q010	F-4	Q805	B-7	D606	D-6
DIODE					
Q013	F-3	D001	D-1	D607	E-6
Q014	G-2	D002	F-8	D608	D-5
Q015	G-4	D004	F-5	D610	B-4
Q016	F-3	D005	G-4	D611	D-6
Q100	F-2	D006	G-3	D612	E-5
Q101	G-11	D014	I-4	D801	E-7
Q102	G-11	D100	F-3	D802	A-8
Q103	G-11	○ D102	G-11	D803	C-11
Q105	F-2	○ D104	G-11	D804	B-10
Q107	H-9	● D105	F-8	D805	C-10
Q109	G-10	● D106	F-8	D806	A-11
Q110	H-5	D107	F-2	D807	E-5
Q111	G-8	D109	F-9	VARIABLE RESISTOR	
Q112	G-12	D301	F-6	○ RV102	H-10
Q113	G-9	D302	F-7	RV801	E-9

Mark : KV-M2170A, M2171A, M2170B, M2171B,  
M2170D, M2171D, M2170E, 2171E ONLY

Mark : KV-M2170K M2171K M2171KB ONI Y

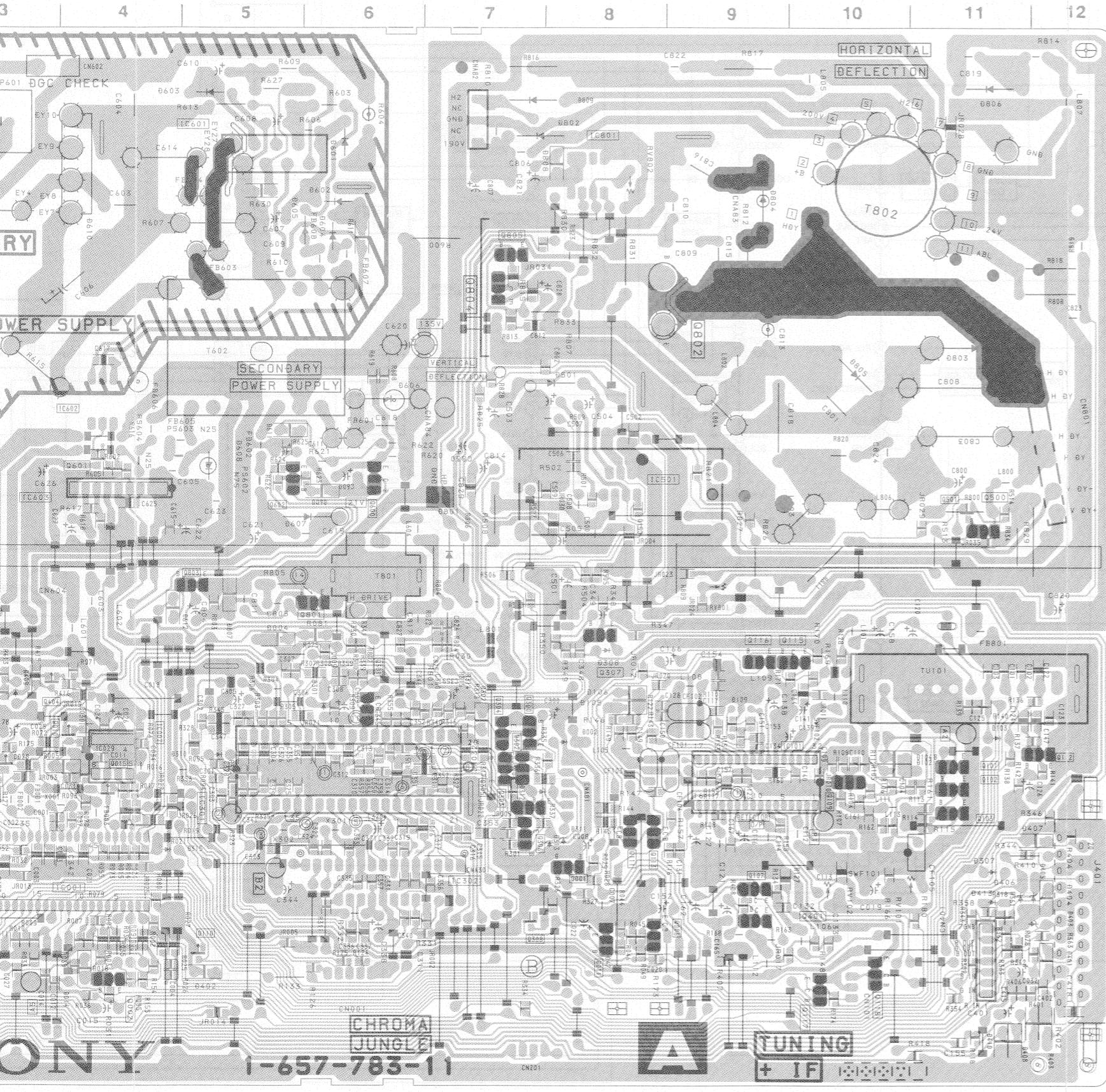
**A** SYSTEM CONTROL, HORIZONTAL OUTPUT,  
VERTICAL OUTPUT, CHROMINANCE,  
POWER, AUDIO

## — A BOARD —



## NOTE:

The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

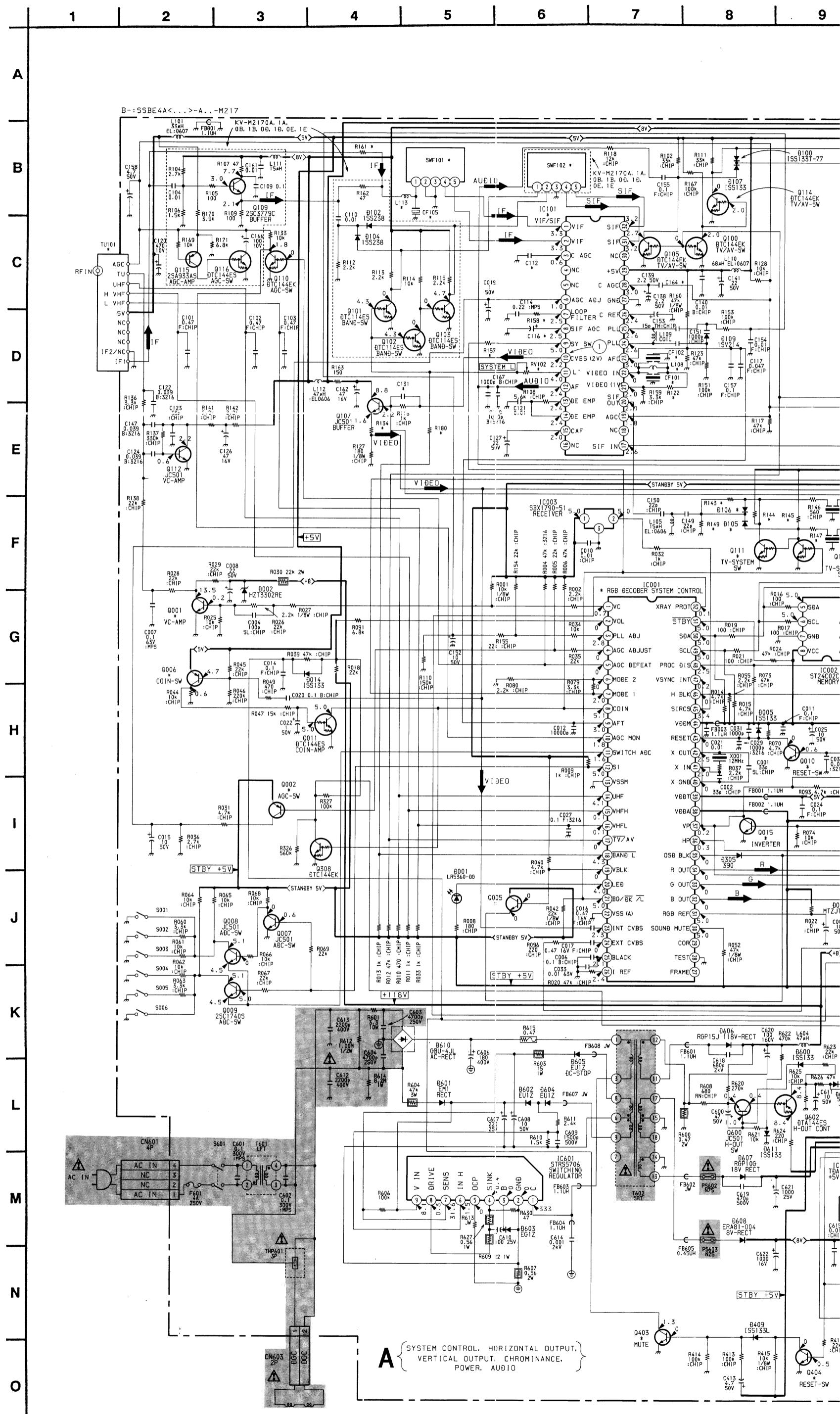


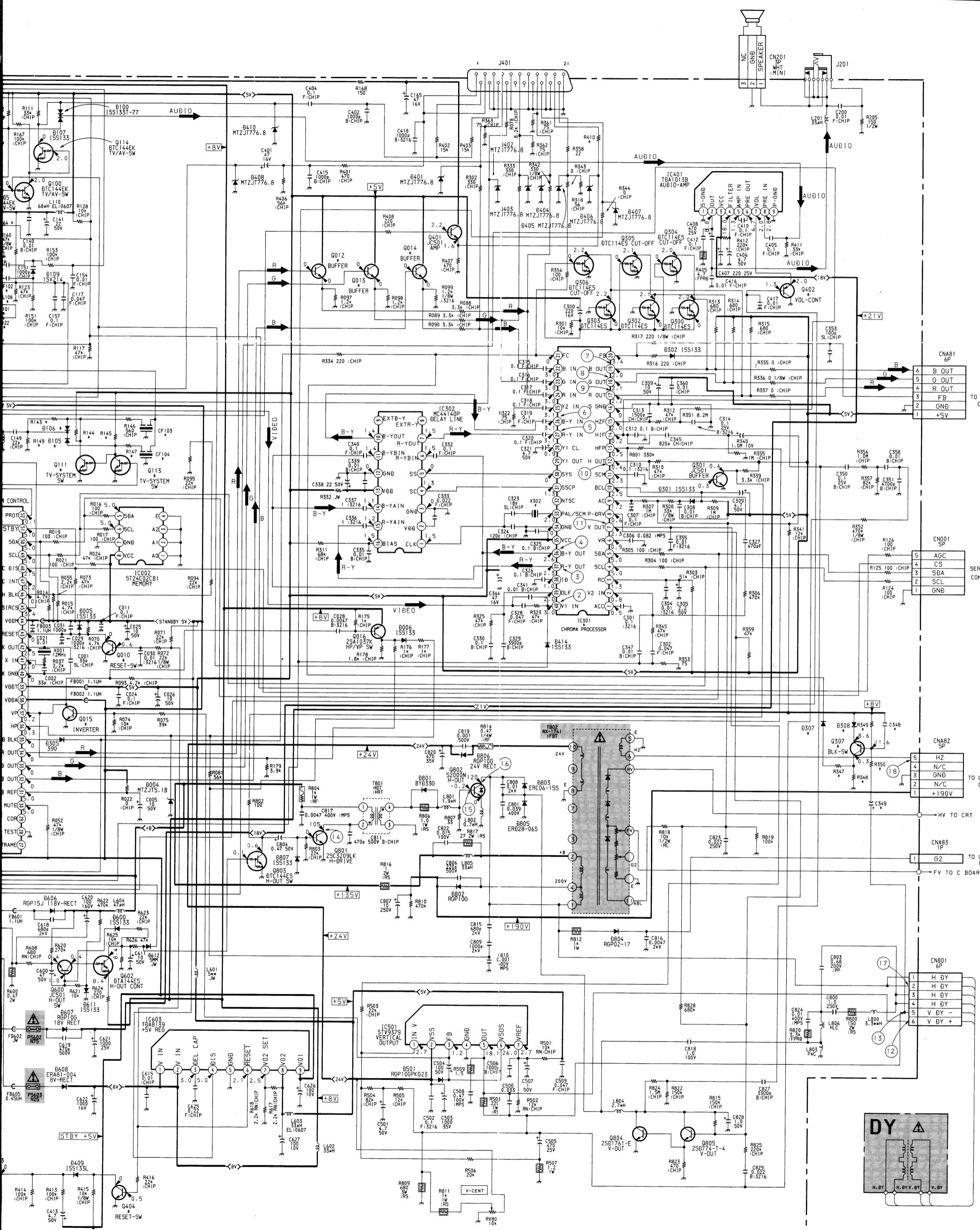
## A BOARD \* MARK

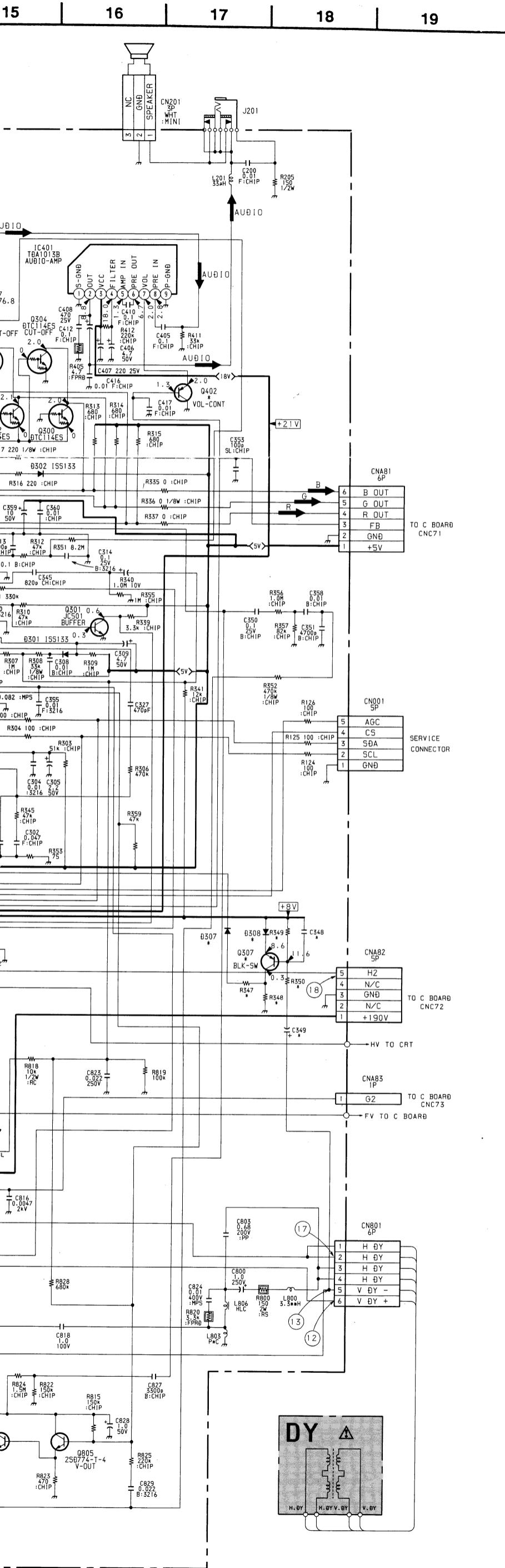
Model Ref. No.	M2170A M2171A	M2170B M2171B	M2170D M2171D	M2170E M2171E	M2170K M2171K	M2171KR	M2170L M2171L	M2170U M2171U
C112	0.1	0.1	0.1	0.1	—	—	—	—
C116	2.2 50V	2.2 50V	2.2 50V	2.2 50V	—	—	—	—
C131	—	—	—	—	0.001	0.001	—	—
C164	1	1	1	1	—	—	—	—
C348	0.01	0.01	0.01	0.01	—	—	—	—
C349	22 50V	22 50V	22 50V	22 50V	—	—	—	—
CF101	5.5 / 5.74MHz	5.5 / 6.5MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	5.5 / 5.74MHz	6.0 / 6.5MHz	6.0 / 6.5MHz
CF102	—	—	—	—	6.5MHz	6.5MHz	—	—
CF103	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	5.5MHz	6.0MHz	6.0MHz
CF104	—	—	—	—	6.5MHz	6.5MHz	—	—
CF105	5.5MHz	5.5MHz	5.5MHz	5.5MHz	—	—	—	—
D105	—	—	—	—	1SS133	1SS133	—	—
D106	—	—	—	—	1SS133	1SS133	—	—
D307	1SS133	1SS133	1SS133	1SS133	—	—	—	—
D308	1SS133	1SS133	1SS133	1SS133	—	—	—	—
FB801	—	—	—	—	1.1μH	1.1μH	1.1μH	1.1μH
IC001	Refer to "A board * mark-2" table							
IC101	TDA9806	TDA9812	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806	TDA9806
IC301	MC44007P	MC44002P	MC44002P	MC44007P	MC44002P	MC44002P	MC44007P	MC44007P
L108	8.2μH	8.2μH	8.2μH	8.2μH	4.7μH	4.7μH	8.2μH	8.2μH
L113	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH	0.22μH
Q001	JC501	JC501	JC501	JC501	2SC2410S	2SC2410S	2SC2410S	2SC2410S
Q002	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q005	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q006	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q010	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q012	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q013	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q014	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q015	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q111	—	—	—	—	DTC144ES	DTC144ES	—	—
Q113	—	—	—	—	DTC144ES	DTC144ES	—	—
Q307	2SA933AS	2SA933AS	2SA933AS	2SA933AS	—	—	—	—
Q402	JA101	JA101	JA101	JA101	2SC933AS	2SC933AS	2SC933AS	2SC933AS
Q403	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
Q404	JC501	JC501	JC501	JC501	2SC2412K	2SC2412K	2SC2412K	2SC2412K
R122	150	150	150	150	100	100	150	150
R134	180	180	180	180	180	180	150	150
R143	0	0	0	0	—	—	0	0
R144	—	—	—	—	2.2K	2.2K	—	—
R145	—	—	—	—	2.2K	2.2K	—	—
R147	—	—	—	—	560	560	—	—
R149	—	—	—	—	2.2K	2.2K	—	—
R157	1K	1K	1K	1K	—	—	—	—
R158	180	180	180	180	390	390	390	390
R161	0	—	0	0	0	0	0	0
R180	1K	1K	1K	1K	—	—	—	—
R347	470	470	470	470	—	—	—	—
R348	10K	10K	10K	10K	—	—	—	—
R349	220K	220K	220K	220K	—	—	—	—
R350	220	220	220	220	—	—	—	—
R355	39μF 10V	39μF 10V	39μF 10V	39μF 10V	47K	47K	47K	47K
R358	47K	47K	47K	47K	39μF 10V	39μF 10V	39μF 10V	39μF 10V
R410	75	75	75	75	75	75	68	68
RV102	22K	22K	22K	22K	—	—	—	—
SWF101	OPWG1963	OFWK3953	OPWG1963	OPWG1963	OFWK2950	OFWK2950	OFWJ1952M	OFWJ1952M
TU101	TELE1X001A	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401	BT-AC401
X302	—	—	—	—	17.472MHz	17.472MHz	17.472MHz	17.472MHz

## A BOARD \* MARK-2 (IC001)

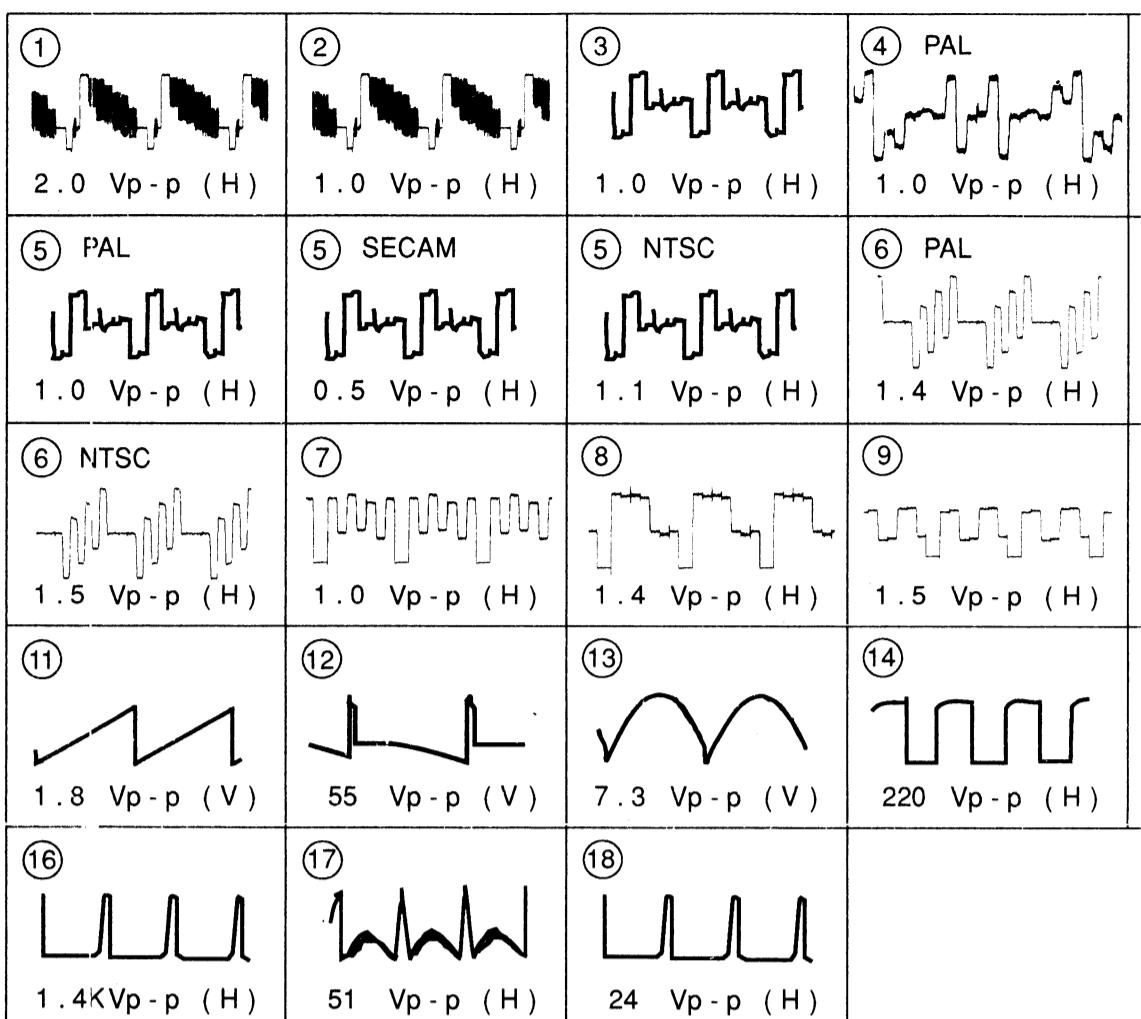
KV-M2170A/M2170B/M2170D/M2170E/M2170K/M2170L/M2170U	SAA5288ZP/007
KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171L/M2171U	SAA5290ZP/007
KV-M2171KR	SAA5290ZP/006



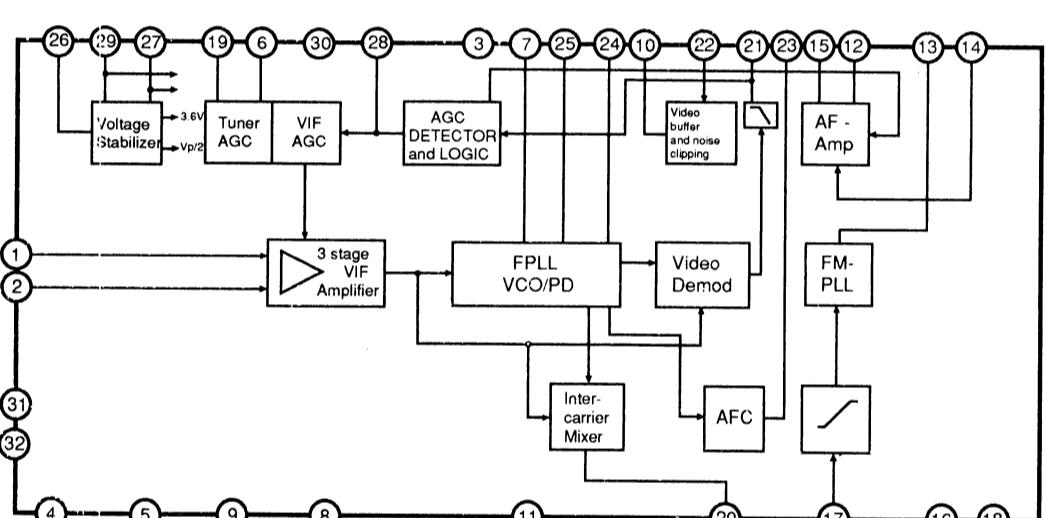




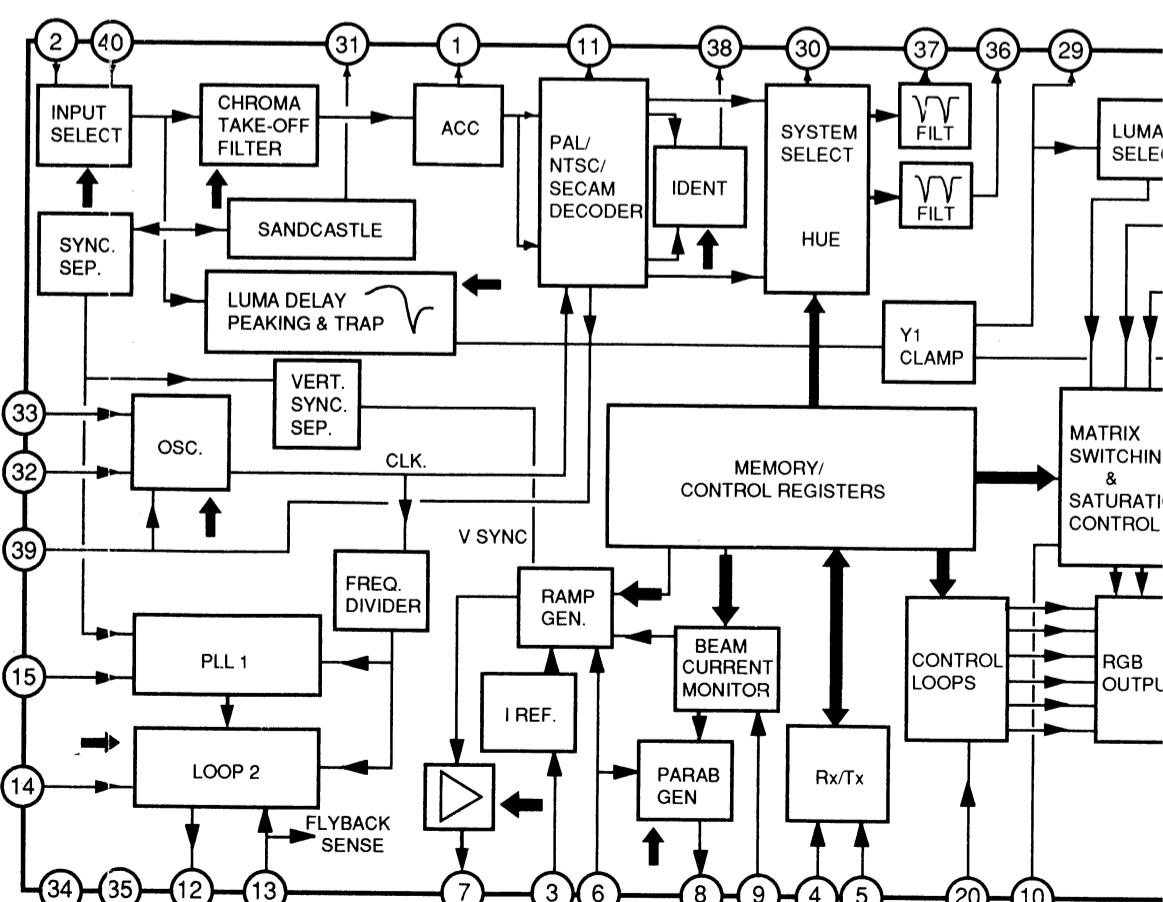
WAVEFORMS A BOARD



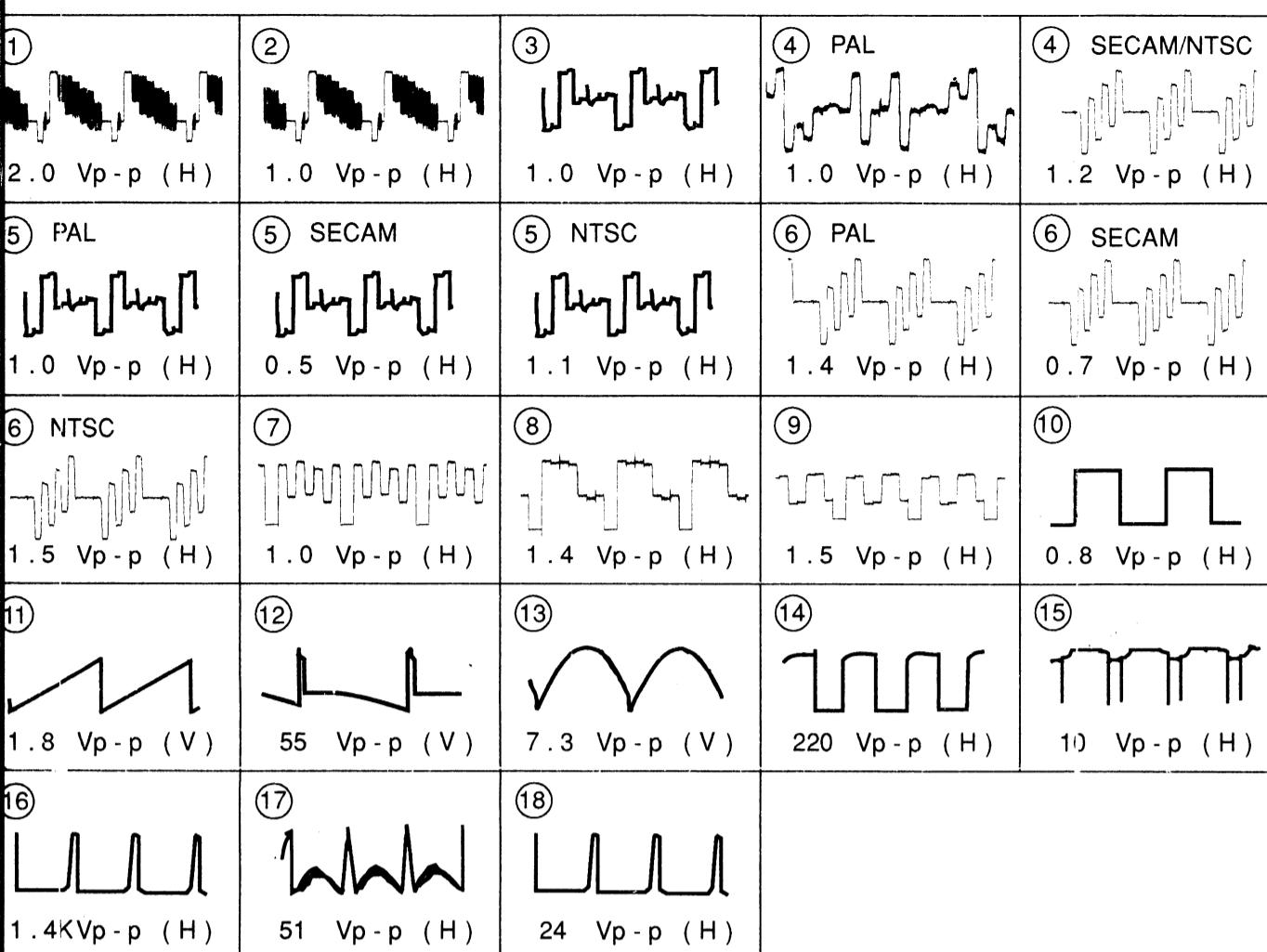
A BOARD IC101 TDA9806/TDA9812



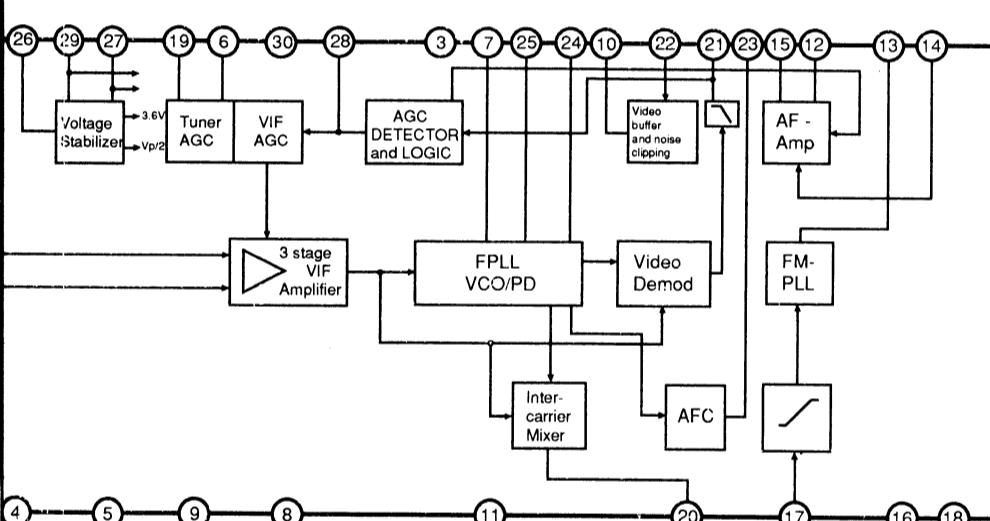
A BOARD IC301 MC44002P/MC44007P



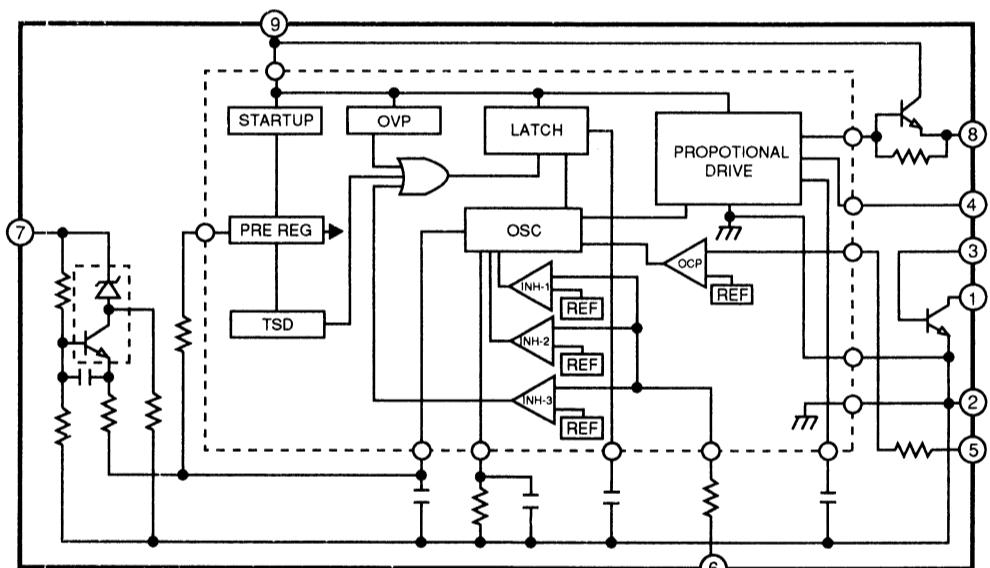
## WAVEFORMS A BOARD



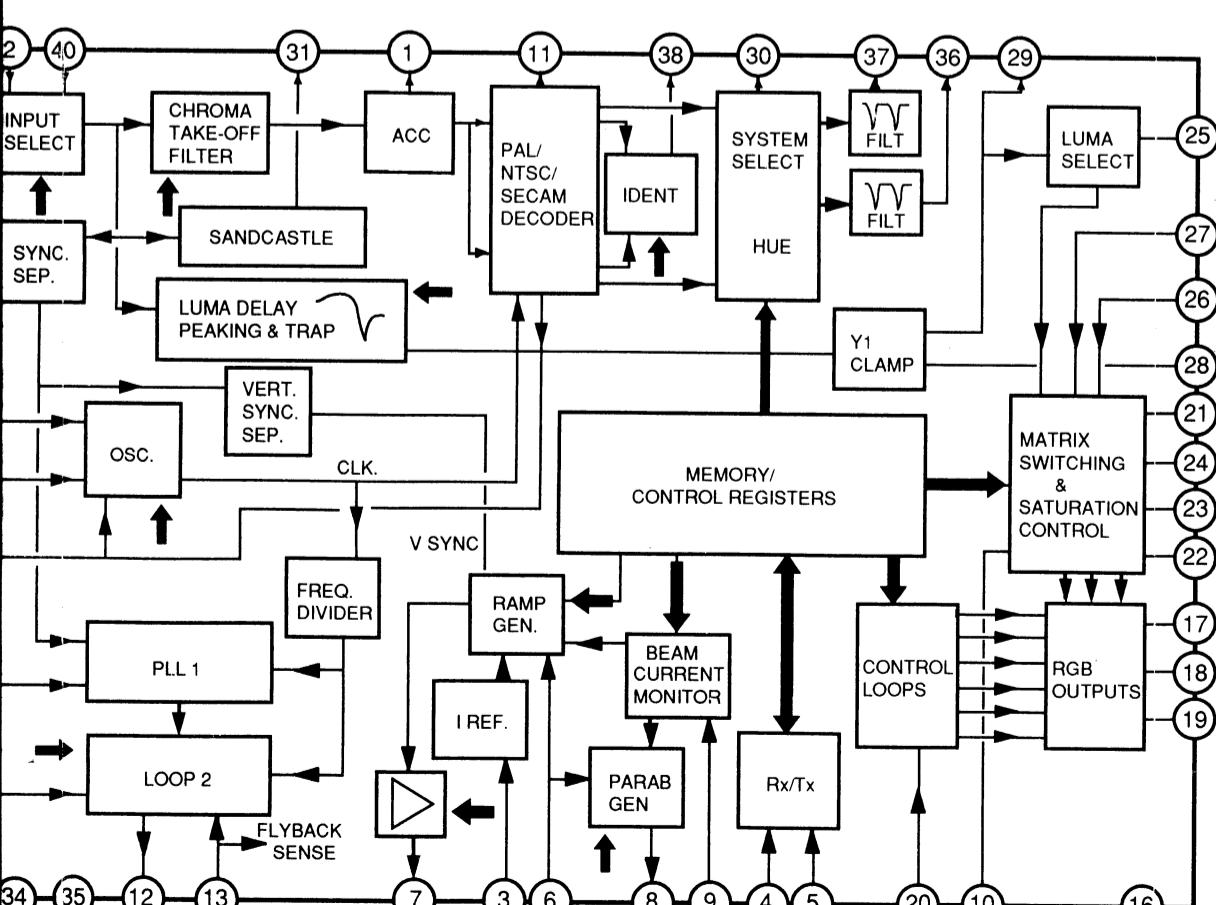
BOARD IC101 TDA9806/TDA9812



A BOARD IC601 STRS5706



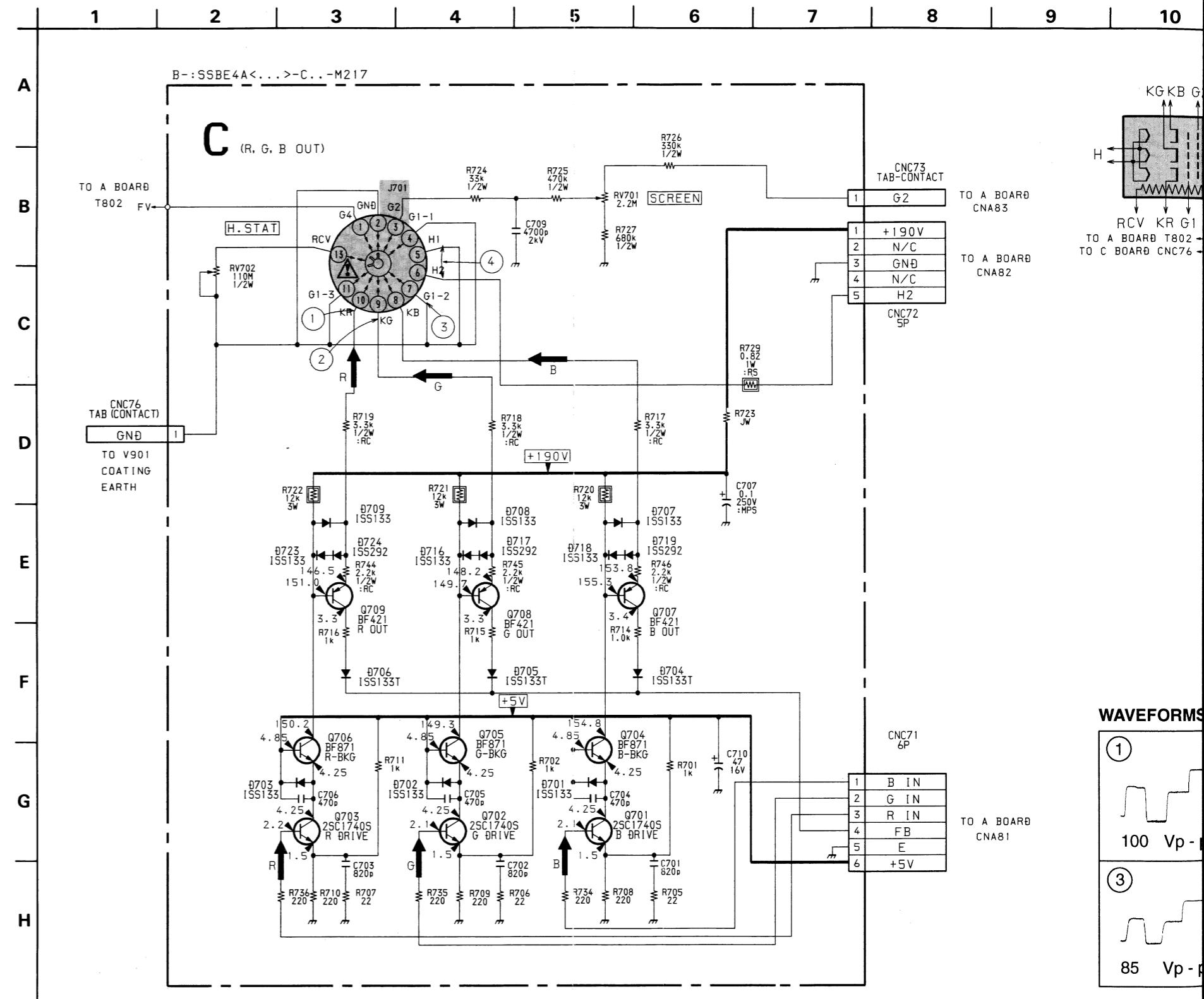
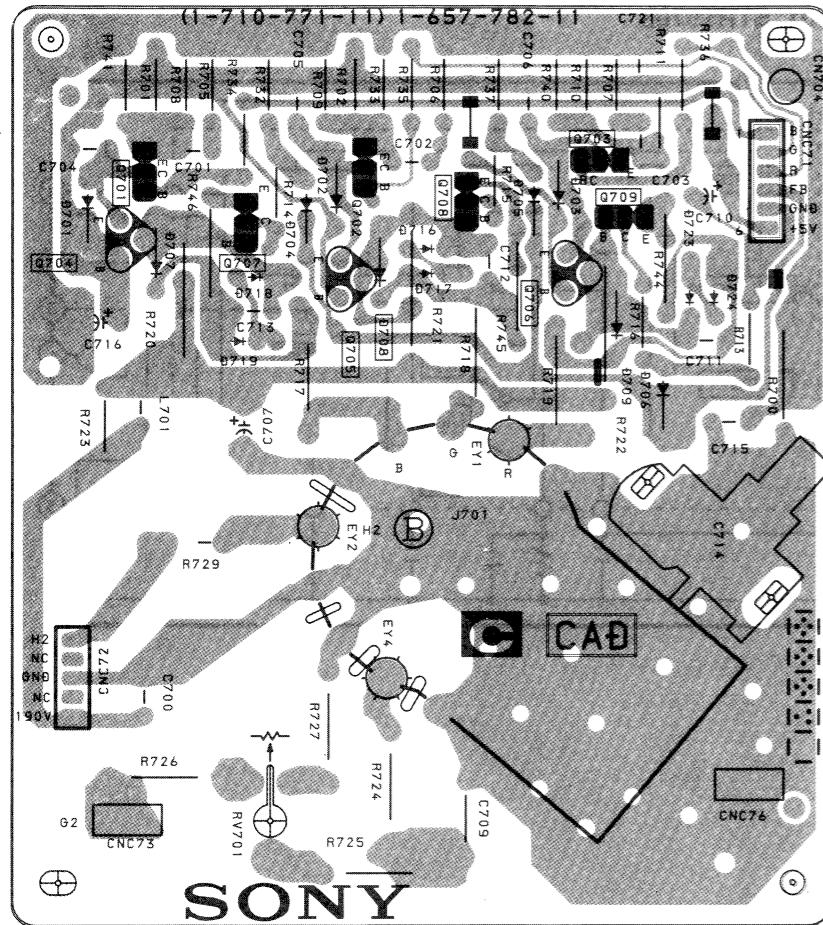
BOARD IC301 MC44002P/MC44007P



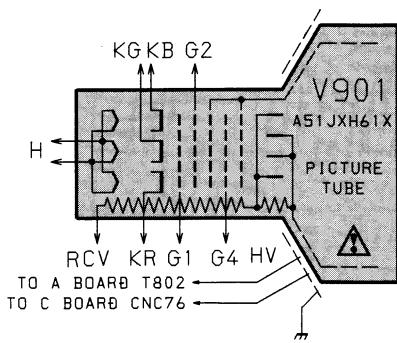
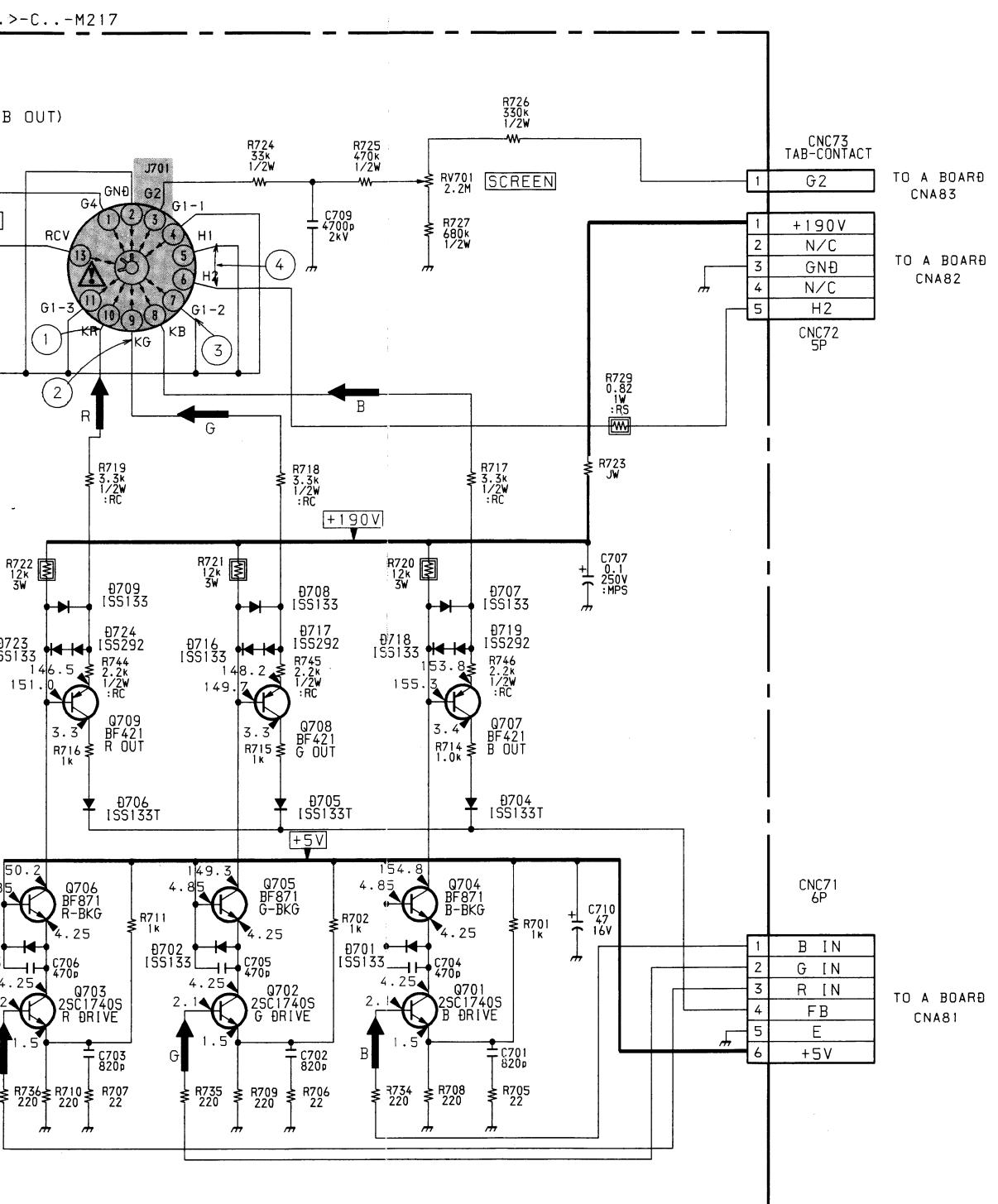
C

[ R.G.B OUT]

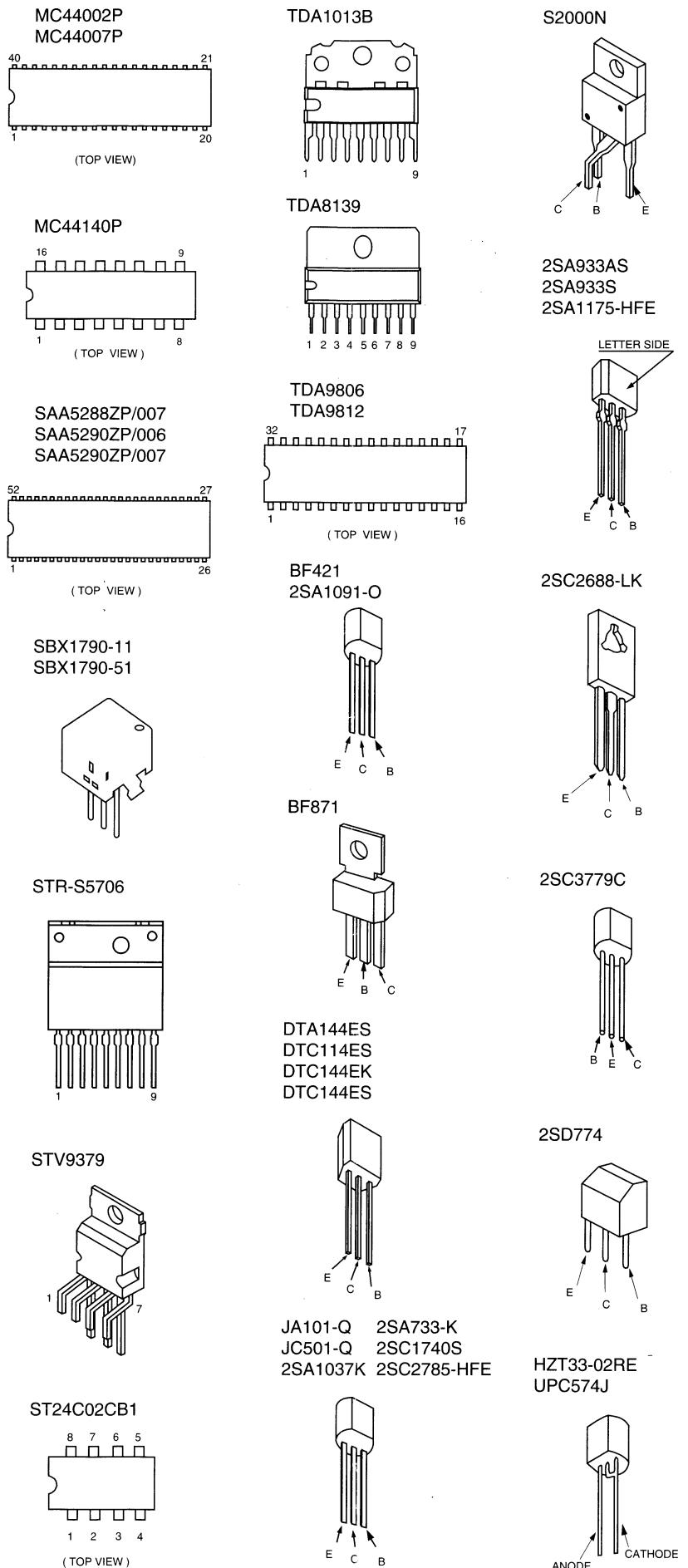
**— C BOARD —**



3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11



## 5-4. SEMICONDUCTORS



## SECTION 6 EXPLODED VIEWS

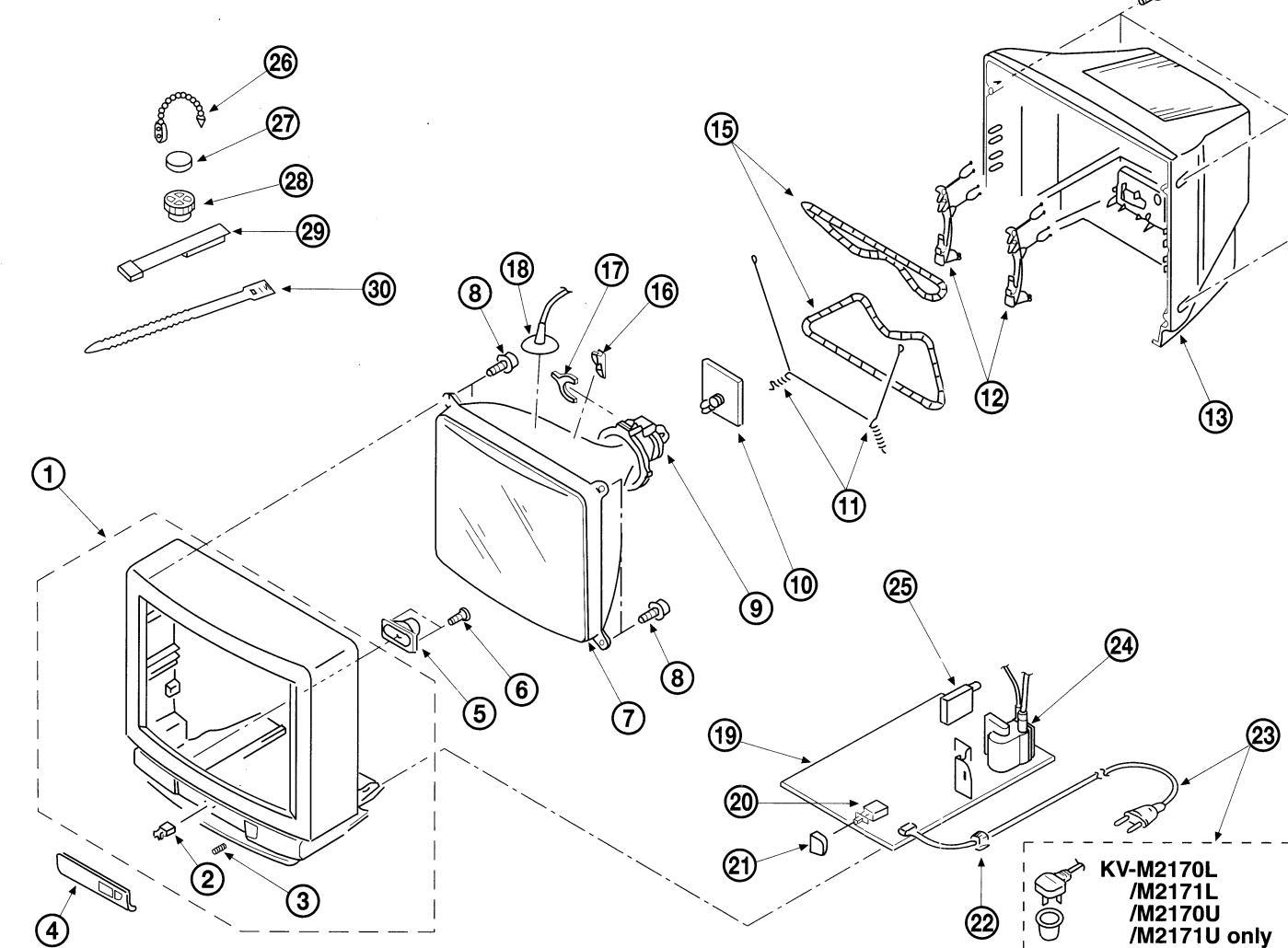
### NOTE :

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remarks column.
- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and marked ! are critical for safety. Replace only with the part number specified.

Les composants identifiés par une trame et une marque ! sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

### 6-1. CHASSIS AND PICTURE TUBE



REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK
1	X-4200-229-2	BEZNET ASSY (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		6	4-039-356-01	SCREW (3x12), (+) BV TAPPING	
	X-4200-229-1	BEZNET ASSY (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)		7	8-738-784-05	PICTURE TUBE (SD-169) (A51JXH61X)	
2	4-392-036-01	CATCHER, PUSH		8	4-036-189-01	SCREW (S), PT	
3	4-387-829-11	SPRING		9	8-451-295-45	DEFLECTION YOKE (Y21PF2BA)	
4	4-203-120-31	DOOR, CONTROL (KV-M2170A/M2170B/M2170D/M2170E)		10	*A-1638-074-A	C BOARD, COMPLETE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)	
	4-203-120-41	DOOR, CONTROL (KV-M2171A)		11	*A-1638-068-A	C BOARD, COMPLETE (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)	
	4-203-120-21	DOOR, CONTROL (KV-M2171B/M2171D/M2171E)			4-369-318-21	SPRING, TENSION	
	4-203-120-11	DOOR, CONTROL (KV-M2170K/M2170L/M2170U)					
	4-203-120-01	DOOR, CONTROL (KV-M2171K/M2171KR/M2171L/M2171U)					
5	1-503-258-21	SPEAKER					

The components identified by shading and marked  are critical for safety.

Replace only with the part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.

Ne les remplacer que par une pièce portant le numéro spécifié.

REF NO	PART NO	DESCRIPTION	REMARK	REF NO	PART NO	DESCRIPTION	REMARK	
12	*4-386-622-11	BAND, DGC	(KV-M2170A/M2171A/M2170B /M2171B/M2170D/M2171D/M2170E/M2171E)		25	1-693-303-11	TUNER (TELE1X001A)	
	*4-386-622-01	BAND, DGC	(KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)		1-693-331-00	TUNER (BT-AC401)	(KV-M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)	
13	4-200-732-01	COVER, REAR	(KV-M2170A/M2171A/M2170B /M2171B/M2170D/M2171D/M2170E/M2171E)		1-693-310-11	TUNER (TELE4X002A)	(KV-M2170K/M2171K)	
	4-200-673-01	COVER, REAR	(KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)		1-693-302-11	TUNER (UV1315)	(KV-M2170L/M2171L)	
14	4-039-358-01	SCREW (4x16, (+) BV TAPPING		8-598-333-00	TUNER (BT-AU601)	(KV-M2170U/M2171U)		
15	*A 1-450-090-21	COTL, DEGAUSSING	(KV-M2170A/M2171A/M2171D/M2170E/M2171E /M2170K/M2171K/M2171KR/M2170L/M2171L /M2170U/M2171U)		26	4-308-870-00	CLIP, LEAD WIRE	
	1-626-125-00	COTL, DEGAUSSING	(KV-M2171A/M2171B/M2170D)		27	1-452-032-00	MAGNET, DISK; 10MM Ø	
16	3-704-495-01	SPACER, DY		28	1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø		
17	1-452-277-00	MAGNET, BMC		29	X-4309-608-0	PERMALLOY ASSY, CONVERGENCE		
18	1-346-006-12	CAP ASSY, HIGH-VOLTAGE	(KV-M2170A/M2171A/M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)		30	3-701-007-00	BAND, BINDING	
	1-340-007-11	CAP ASSY, HIGH-VOLTAGE	(KV-M2170K/M2171K/M2171KR /M2170L/M2171L/M2170U/M2171U)					
19	*A-1632-310-A	A BOARD, COMPLETE	(KV-M2170A)					
	*A-1632-309-A	A BOARD, COMPLETE	(KV-M2171A)					
	*A-1632-314-A	A BOARD, COMPLETE	(KV-M2170B)					
	*A-1632-315-A	A BOARD, COMPLETE	(KV-M2171B)					
	*A-1632-308-A	A BOARD, COMPLETE	(KV-M2170D)					
	*A-1632-307-A	A BOARD, COMPLETE	(KV-M2171D)					
	*A-1632-313-A	A BOARD, COMPLETE	(KV-M2170E)					
	*A-1632-311-A	A BOARD, COMPLETE	(KV-M2171E)					
	*A-1632-306-A	A BOARD, COMPLETE	(KV-M2170K)					
	*A-1632-304-A	A BOARD, COMPLETE	(KV-M2171K)					
	*A-1632-305-A	A BOARD, COMPLETE	(KV-M2171KR)					
	*A-1632-303-A	A BOARD, COMPLETE	(KV-M2170L)					
	*A-1632-302-A	A BOARD, COMPLETE	(KV-M2171L)					
	*A-1632-301-A	A BOARD, COMPLETE	(KV-M2170U)					
	*A-1632-300-A	A BOARD, COMPLETE	(KV-M2171U)					
20	*A 1-371-433-21	SWITCH, PUSH (AC POWER)						
21	4-203-121-01	BUTTON, POWER	(KV-M2170B/M2170K/M2171K /M2171L/M2170U/M2171U)					
	4-203-121-11	BUTTON, POWER	(KV-M2170A/M2171A/M2171B /M2170D/M2171D/M2170E/M2171E)					
22	4-389-201-01	HOLDER, AC CORD						
	1-390-270-21	CORD, POWER (WITH CONNECTOR)	2.5A/250V (KV-M2170A/M2171A/M2170B/M2171B /M2170D/M2171D/M2170E/M2171E)					
	1-390-460-11	CORD, POWER (WITH CONNECTOR)	7.0A/250V (KV-M2170K/M2171K/M2171KR)					
	1-390-762-11	CORD, POWER (WITH PLUG)	2.5A/250V (KV-M2170L/M2171L/M2170U/M2171U)					
	1-393-199-11	TRANSFORMER ASSY, FLYBACK	(NX-1741/02)					

# SECTION 7

## ELECTRICAL PARTS LIST

When indicating parts by reference number, please include the board name.

- Items marked " \* " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

The components identified by shading and marked  are critical for safety.  
Replace only with the part number specified.

Les composants identifies par une trame et une marque  sont critiques pour la securite.  
Ne les remplacer que par une piece portant le numero specifie.

A

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK		
	*A-1632-310-A	A BOARD, COMPLETE (KV-M2170A) *****		C017	1-164-005-11	CERAMIC CHIP 0.47MF	16V		
	C019				1-124-903-11	ELECT 1MF	20% 50V		
	*A-1632-309-A	A BOARD, COMPLETE (KV-M2171A) *****		C020	1-164-004-11	CERAMIC CHIP 0.1MF	10% 25V		
	C021				1-163-071-91	CERAMIC CHIP 0.01MF	50V		
	*A-1632-314-A	A BOARD, COMPLETE (KV-M2170B) *****		C022	1-124-903-11	ELECT 1MF	20% 50V		
	C024				1-163-038-91	CERAMIC CHIP 0.1MF	25V		
	*A-1632-315-A	A BOARD, COMPLETE (KV-M2171B) *****		C025	1-126-964-11	ELECT 10MF	20% 50V		
	C026				1-126-964-11	ELECT 10MF	20% 50V		
	*A-1632-307-A	A BOARD, COMPLETE (KV-M2171D) *****		C027	1-163-038-91	CERAMIC CHIP 10000PF	25V		
	C028				1-163-055-91	CERAMIC CHIP 0.0047MF	10% 50V		
	*A-1632-313-A	A BOARD, COMPLETE (KV-M2170E) *****		C029	1-163-009-91	CERAMIC CHIP 1000PF	10% 50V		
	C030				1-163-021-91	CERAMIC CHIP 10000PF	10% 100V		
	*A-1632-311-A	A BOARD, COMPLETE (KV-M2171E) *****		C031	1-163-009-91	CERAMIC CHIP 1000PF	5% 25V		
	C033				1-137-126-91	FILM 0.01MF	5% 63V		
	*A-1632-306-A	A BOARD, COMPLETE (KV-M2170K) *****		C101	1-164-005-11	CERAMIC CHIP 0.47MF	16V		
	C102				1-164-005-11	CERAMIC CHIP 0.47MF	16V		
	*A-1632-304-A	A BOARD, COMPLETE (KV-M2171K) *****		C103	1-164-005-11	CERAMIC CHIP 0.47MF	16V		
	C104				1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V		
	*A-1632-303-A	A BOARD, COMPLETE (KV-M2170L) *****			(KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)				
	C109				1-163-038-91	CERAMIC CHIP 0.1MF	25V		
					(KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)				
	*A-1632-302-A	A BOARD, COMPLETE (KV-M2171L) *****		C110	1-163-021-91	CERAMIC CHIP 0.01MF	10% 50V		
	C112				(KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)				
	*A-1632-301-A	A BOARD, COMPLETE (KV-M2170U) *****			1-137-399-11	FILM 0.1MF	5% 50V		
	C114				(KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)				
	*A-1632-300-A	A BOARD, COMPLETE (KV-M2171U) *****			1-136-169-00	FILM 0.22MF	5% 50V		
					1-124-925-11	ELECT 2.2MF	20% 50V		
					(KV-M2170A/M2171A/M2170B/M2171B/M2170D M2171D/M2170E/M2171E)				
	C001	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C117	1-163-035-00	CERAMIC CHIP 0.047MF	50V
	C002	1-163-105-00	CERAMIC CHIP 33PF	5%	50V	C120	1-126-925-11	ELECT 470MF	20% 10V
	C004	1-163-117-00	CERAMIC CHIP 100PF	5%	50V	C121	1-136-153-00	FILM 0.01MF	5% 50V
	C005	1-126-964-11	ELECT 10MF	20%	50V	C122	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V
	C006	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C123	1-163-105-00	CERAMIC CHIP 33PF	5% 50V
	C007	1-130-777-00	FILM 0.1MF	5%	63V	C124	1-164-665-11	CERAMIC CHIP 0.039MF	10% 50V
	C008	1-128-551-11	ELECT 22MF	20%	50V	C126	1-104-658-91	ELECT 47MF	20% 16V
	C010	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	C127	1-128-551-11	ELECT 22MF	20% 50V
	C011	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C131	1-163-141-00	CERAMIC CHIP 0.001MF	10% 50V	
	C012	1-163-031-91	CERAMIC CHIP 10000PF	50V		(KV-M2170K/M2171K/M2171KR)			
	C014	1-163-038-91	CERAMIC CHIP 0.1MF	25V	C138	1-124-925-11	ELECT 2.2MF	20% 50V	
	C015	1-126-964-11	ELECT 10MF	20%	50V	C139	1-124-925-11	ELECT 2.2MF	20% 50V
	C016	1-164-005-11	CERAMIC CHIP 0.47MF	16V					

The components identified by shading and marked  are critical for safety.  
Replace only with the part number specified.

Les composants identifiés par une trame et une marque  sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifié.

**A**

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK		
C140	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	C339	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C141	1-128-551-11	ELECT 22MF	20%	50V	C340	1-163-038-91	CERAMIC CHIP 0.1MF	25%	
C147	1-164-665-11	CERAMIC CHIP 0.039MF	10%	50V	C341	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C149	1-163-101-00	CERAMIC CHIP 22PF	5%	50V	C344	1-104-658-91	ELECT 47MF	20%	50V
					C345	1-163-139-00	CERAMIC CHIP 820PF	10%	50V
C150	1-163-101-00	CERAMIC CHIP 22PF	5%	50V					
C151	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V	C347	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V
C152	1-126-964-11	ELECT 10MF	20%	50V	C348	1-163-031-91	CERAMIC CHIP 0.01MF	50V	
C153	1-163-470-91	CERAMIC CHIP 15PF	5%	50V			(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		
C154	1-163-031-91	CERAMIC CHIP 0.01MF		50V					
C155	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C349	1-128-551-11	ELECT 22MF	20%	50V
C157	1-163-038-91	CERAMIC CHIP 0.1MF		25V			(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		
C158	1-124-927-11	ELECT 4.7MF	20%	50V	C350	1-163-004-11	CERAMIC CHIP 0.1MF	10%	25V
C161	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	C351	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)							
C162	1-104-658-91	ELECT 47MF	20%	16V	C353	1-163-117-00	CERAMIC CHIP 100PF	5%	50V
C164	1-162-638-11	CERAMIC CHIP 1MF		16V	C355	1-163-071-91	CERAMIC CHIP 0.01MF		50V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)			C358	1-163-021-91	CERAMIC CHIP 0.01MF	10%	100V
C165	1-104-658-91	ELECT 47MF	20%	16V	C359	1-126-964-11	ELECT 10MF	20%	50V
C166	1-104-658-91	ELECT 100MF	20%	10V	C360	1-163-021-91	CERAMIC CHIP 10000PF	10%	100V
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)							
C167	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	C401	1-104-658-91	ELECT 47MF	20%	16V
C168	1-163-205-00	CERAMIC CHIP 0.001MF	10%	50V	C402	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
					C404	1-163-038-91	CERAMIC CHIP 0.1MF	25V	
C200	1-163-071-91	CERAMIC CHIP 0.01MF	10%	50V	C405	1-163-038-91	CERAMIC CHIP 0.1MF	25V	
C300	1-126-934-11	ELECT 220MF	20%	16V	C406	1-124-927-11	ELECT 4.7MF	20%	50V
C301	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V					
C302	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C407	1-104-666-11	ELECT 220MF	20%	25V
C304	1-163-059-91	CERAMIC CHIP 0.01MF	10%	50V	C408	1-126-941-11	ELECT 470MF	20%	25V
C305	1-124-925-11	ELECT 2.2MF	20%	50V	C410	1-163-038-91	CERAMIC CHIP 0.1MF	25V	
C306	1-130-494-11	FILM 0.082MF	5%	50V	C412	1-163-038-91	CERAMIC CHIP 0.1MF	25V	
C307	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C413	1-124-927-11	ELECT 4.7MF	20%	50V
C308	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V					
C309	1-124-927-11	ELECT 4.7MF	20%	50V	C415	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
C310	1-163-077-00	CERAMIC CHIP 0.1MF	10%	25V	C416	1-163-031-91	CERAMIC CHIP 0.01MF	50V	
C312	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C417	1-163-031-91	CERAMIC CHIP 0.01MF	50V	
C313	1-163-145-00	CERAMIC CHIP 0.0015MF	5%	50V	C418	1-163-205-00	CERAMIC CHIP 0.001MF	10%	50V
C314	1-163-077-91	CERAMIC CHIP 0.1MF		50V	C500	1-130-489-00	FILM 0.033MF	5%	50V
C315	1-163-038-91	CERAMIC CHIP 0.1MF		25V					
C316	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C501	1-124-927-11	ELECT 4.7MF	20%	50V
C317	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C502	1-163-077-91	CERAMIC CHIP 0.1MF	50V	
C318	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C503	1-126-952-11	ELECT 1000MF	20%	35V
C319	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C504	1-124-122-11	ELECT 100MF	20%	50V
C320	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C505	1-126-941-11	ELECT 470MF	20%	25V
C321	1-124-927-11	ELECT 4.7MF	20%	50V	C506	1-163-009-91	CERAMIC CHIP 0.001MF	10%	50V
C323	1-163-163-91	CERAMIC CHIP 18PF	5%	50V	C507	1-124-903-11	ELECT 1MF	20%	50V
C324	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	C508	1-130-785-11	MYLAR 0.47MF	10%	100V
C325	1-163-035-00	CERAMIC CHIP 0.1MF	10%	25V	C509	1-163-035-00	CERAMIC CHIP 0.047MF	50V	
C326	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C600	1-126-967-11	ELECT 47MF	20%	50V
C321	1-124-927-11	ELECT 4.7MF	20%	50V	C601	1-136-516-12	FILM 0.1MF	20%	300V
C323	1-163-163-91	CERAMIC CHIP 18PF	5%	50V	C602	1-136-516-12	FILM 0.1MF	20%	300V
C324	1-163-119-00	CERAMIC CHIP 120PF	5%	50V	C603	1-162-599-12	CERAMIC 0.047MF	20%	300V
C325	1-163-035-00	CERAMIC CHIP 0.1MF	10%	25V	C604	1-162-599-12	CERAMIC 0.047MF	20%	300V
C326	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C606	1-113-473-11	CAP, ELECT 180MF		
C327	1-163-005-91	CERAMIC CHIP 470PF	10%	50V	C607	1-104-666-11	ELECT 220MF	20%	25V
C328	1-163-035-00	CERAMIC CHIP 0.047MF		50V	C608	1-126-964-11	ELECT 10MF	20%	50V
C329	1-163-016-00	CERAMIC CHIP 0.0039MF	10%	50V	C609	1-109-921-11	CERAMIC 0.0015MF	10%	500V
C330	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	C610	1-104-665-11	ELECT 100MF	20%	25V
C332	1-163-038-91	CERAMIC CHIP 0.1MF		25V	C611	1-126-964-11	ELECT 10MF	20%	50V
C333	1-163-033-91	CERAMIC CHIP 0.022MF		50V	C612	1-161-742-00	CERAMIC 0.0022MF	30%	100V
C335	1-163-021-91	CERAMIC CHIP 0.01MF	10%	50V	C613	1-161-742-00	CERAMIC 0.0022MF	30%	100V
C336	1-162-638-11	CERAMIC CHIP 1MF		16V	C614	1-136-538-11	FILM 0.001MF	3%	2KV
C337	1-162-638-11	CERAMIC CHIP 1MF		16V	C615	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V
C338	1-128-551-11	ELECT 22MF	20%	50V	C618	1-162-116-00	CERAMIC 680PF	10%	2KV
					C619	1-102-228-00	CERAMIC 470PF	10%	500V

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Replace only with the part number specified.

Les composants identifiés par une trame et une marque **A** sont critiques pour la sécurité.  
Ne les remplacer que par une pièce portant le numéro spécifique.

REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
C620	1-124-347-00	ELECT	100MF	20%	160V		< CONNECTOR >
C621	1-126-942-61	ELECT	1000MF	20%	25V	CN001	*1-568-880-51 PIN, CONNECTOR 5P
C622	1-111-041-51	ELECT	1000MF	20%	16V	CN201	*1-564-506-11 PLUG, CONNECTOR 3P
C625	1-164-222-11	CERAMIC CHIP	0.22MF		25V	CN601	*1-580-844-11 PIN, CONNECTOR (POWER)
C626	1-104-658-91	ELECT	100MF	20%	16V	CN603	*1-508-786-00 PIN, CONNECTOR (5MM PITCH) 2P
C627	1-104-658-91	ELECT	100MF	20%	16V	CN801	*1-580-798-11 CONNECTOR PIN (DY) 6P
C800	1-126-772-11	ELECT	1MF	20%	250V	CNA81	*1-568-881-51 PIN, CONNECTOR 6P
C801	1-129-746-00	FILM	0.039MF	10%	400V	CNA82	*1-568-880-51 PIN, CONNECTOR 5P
C803	1-136-109-00	FILM	0.68MF	5%	200V		< DIODE >
C804	1-124-902-00	ELECT	0.47MF	20%	50V	D001	8-719-052-94 DIODE LR5360-DG
C806	1-102-244-00	CERAMIC	220PF	10%	500V	D002	8-759-157-40 IC MPC574J
C807	1-107-652-11	ELECT	10MF	20%	250V	D004	8-719-109-85 DIODE RD5.1ESB2
C808	1-136-079-00	FILM	0.01MF	3%	2KV	D005	8-719-991-33 DIODE 1SS133T-77
C809	1-161-754-00	CERAMIC	0.001MF	10%	2KV	D006	8-719-991-33 DIODE 1SS133T-77
C810	1-129-702-00	FILM	0.001MF	10%	400V	D014	8-719-991-33 DIODE 1SS133T-77
C811	1-102-228-00	CERAMIC	470PF	10%	500V	D100	8-719-991-33 DIODE 1SS133T-77
C815	1-162-116-00	CERAMIC	680PF	10%	2KV	D102	8-719-903-27 DIODE 1SS168 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
C816	1-162-114-00	CERAMIC	0.0047MF		2KV	D104	8-719-903-27 DIODE 1SS168 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
C817	1-136-559-11	MYLAR	0.0047MF	10%	400V	D105	8-719-991-33 DIODE 1SS133T-77 (KV-M2170K/M2171K/ M2171KR)
C818	1-136-933-11	FILM	1MF	5%	100V	D106	8-719-991-33 DIODE 1SS133T-77 (KV-M2170K/M2171K/ M2171KR)
C819	1-162-318-11	CERAMIC	0.001MF	10%	500V	D107	8-719-991-33 DIODE 1SS133T-77
C820	1-126-951-11	ELECT	220MF	20%	35V	D109	8-719-820-71 DIODE 1SV214
C822	1-104-696-11	FILM	0.015MF	10%	100V	D301	8-719-991-33 DIODE 1SS133T-77
C823	1-106-375-12	MYLAR	0.022MF	10%	250V	D302	8-719-991-33 DIODE 1SS133T-77
C824	1-106-367-00	MYLAR	0.01MF	10%	400V	D305	1-247-821-91 CARBON 390 5% 1/4W
C827	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V	D307	8-719-991-33 DIODE 1SS133T-77 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
C828	1-124-903-11	ELECT	1MF	20%	50V	D308	8-719-991-33 DIODE 1SS133T-77 (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
C829	1-163-063-91	CERAMIC CHIP	0.022MF	10%	50V	D401	8-719-109-97 DIODE RD6.8ESB2
< FILTER >							
CF101	1-404-801-31	TRAP, CERAMIC (KV-M2170A/M2171A/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR)			D402	8-719-109-97 DIODE RD6.8ESB2	
	1-409-429-11	TRAP, CERAMIC (KV-M2170L/M2171L/M2170U/M2171U)			D403	8-719-109-97 DIODE RD6.8ESB2	
	1-409-430-11	TRAP, CERAMIC (KV-M2170B/M2171B)			D404	8-719-109-97 DIODE RD6.8ESB2	
CF102	1-409-327-00	TRAP, CERAMIC (6.5 MHz) (KV-M2170K/M2171K/M2171KR)			D405	8-719-109-97 DIODE RD6.8ESB2	
CF103	1-567-100-00	FILTER, CERAMIC (KV-M2170L/M2171L/M2170U/M2171U)			D406	8-719-109-97 DIODE RD6.8ESB2	
	1-760-106-11	FILTER, CERAMIC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR)			D407	8-719-109-97 DIODE RD6.8ESB2	
CF104	1-567-101-11	FILTER, CERAMIC (KV-M2170K/M2171K/M2171KR)			D408	8-719-109-97 DIODE RD6.8ESB2	
CF105	1-760-154-11	TRAP, CERAMIC (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)			D409	8-719-991-33 DIODE 1SS133T-77	
SWF101	1-579-120-11	FILTER, SURFACE WAVE (KV-M2170A/M2171A/M2170D/M2171D/M2170E/M2171B)			D410	8-719-109-97 DIODE RD6.8ESB2	
	1-579-273-11	FILTER, SURFACE WAVE (KV-M2170B/M2171B)			D414	8-719-991-33 DIODE 1SS133T-77	
	1-579-414-11	FILTER, SURFACE WAVE (KV-M2170K/M2171K/M2171KR)			D501	8-719-302-43 DIODE EL1Z	
	1-760-711-11	FILTER, SURFACE WAVE (KV-M2170L/M2171L/M2170U/M2171U)			D600	8-719-991-33 DIODE 1SS133T-77	
SWF102	1-760-722-11	FILTER, SURFACE WAVE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)			D601	8-719-046-77 DIODE EM1-V1	
					D602	8-719-312-61 DIODE EU-1Z	
					D603	8-719-046-78 DIODE EG-1Z-V1	
					D604	8-719-312-61 DIODE EU-1Z	
					D605	8-719-312-61 DIODE EU-1Z	
					D606	8-719-979-85 DIODE EGP20G	
					D607	8-719-302-43 DIODE EL1Z	
					D608	8-719-980-78 DIODE ERA83-006	
					D610	8-719-025-88 DIODE GBU4JL-6088	

The components identified by shading and marked  are critical for safety.  
Replace only with the part number specified.

Les composants identifies par une trame et une marque  sont critiques pour la securite.  
Ne les remplacer que par une piece portant le numero specifie.

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
D611	8-719-991-33	DIODE 1SS133T-77		L108	1-408-405-00	INDUCTOR 4.7UH	(KV-M2170K/M2171K/M2171KR)
D801	8-719-950-57	DIODE BYD33G			1-408-408-00	INDUCTOR 8.2UH	(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170L/M2171L/M2170U/M2171U)
D802	8-719-302-43	DIODE EL1Z		L109	1-403-686-12	COIL	
D803	8-719-945-80	DIODE ERC06-15S		L110	1-410-673-31	INDUCTOR 68UH	
D804	8-719-028-72	DIODE RGP02-17EL-6433		L111	1-410-665-41	INDUCTOR 15UH	(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
D805	8-719-928-08	DIODE ERD28-08S		L112	1-408-417-00	INDUCTOR 47UH	
D806	8-719-302-43	DIODE EL1Z		L113	1-410-985-41	INDUCTOR CHIP 0.22UH	(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L)
D807	8-719-991-33	DIODE 1SS133T-77			1-216-295-00	METAL GLAZE 0 5% 1/10W	(KV-M2170U/M2171U)
			< FUSE >				
F601	1-576-231-11	FUSE (H.E.C.) 4A. 250V		L201	1-412-531-31	INDUCTOR 33UH	
	1-533-230-11	HOLDER, FUSE ; F601		L602	1-408-609-41	INDUCTOR 33UH	
			< FERRITE BEAD >	L603	1-410-669-31	INDUCTOR 33UH	
FB001	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L604	1-408-417-00	INDUCTOR 47UH	
FB002	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L800	1-412-553-41	INDUCTOR 3.3MMH	
FB003	1-410-397-31	FERRITE BEAD INDUCTOR 1.1UH					
FB601	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L801	1-420-872-00	COIL, AIR CORE	
FB603	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L802	1-407-365-00	COIL, CHOKE	
				L803	1-459-390-00	COIL (WITH CORE)	
FB604	1-410-397-21	FERRITE BEAD INDUCTOR 1.1UH		L804	1-459-105-21	COIL (WITH CORE)	
FB605	1-410-396-41	FERRITE BEAD INDUCTOR 0.45UH		L805	1-412-531-21	INDUCTOR 33UH	
FB801	1-410-397-31	FERRITE BEAD INDUCTOR 1.1UH		L806	1-459-652-12	COIL, HORIZONTAL LINEARITY	
			< IC >				
IC001	8-759-354-63	IC SAA5290ZP/006 (KV-M2171KR)					
	8-759-354-64	IC SAA5290ZP/007 (KV-M2171A/M2171B/M2171D/M2171E/M2171K/M2171L/M2171U)					
	8-759-354-82	IC SAA5288ZP/007 (KV-M2170A/M2170B/M2170D/M2170E/M2170K/M2170L/M2170U)					
IC002	8-759-280-74	IC ST24C02CB1					
IC003	8-747-905-11	IC SBX1790-11					
IC101	8-759-333-17	IC TDA9812 (KV-M2170B/M2171B)					
	8-759-333-19	IC TDA9806 (KV-M2170A/M2171A/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)					
IC301	8-759-333-44	IC MC44007P (KV-M2170A/M2171A/M2170E/M2171E/M2170L/M2171L/M2170U/M2171U)					
	8-759-333-45	IC MC44002P (KV-M2170B/M2171B/M2170D/M2171D/M2170K/M2171K/M2171KR)					
IC302	8-759-333-46	IC MC44140P					
IC401	8-759-041-82	IC TDA1013B					
	4-203-017-01	HEATSINK, VR ; IC401					
IC501	8-759-192-71	IC STV9379					
IC601	8-749-011-02	IC STR-S5706					
IC603	8-759-337-99	IC TDA8139					
			< SOCKET >				
J201	1-568-267-21	JACK					
J401	1-561-534-00	SOCKET 21P					
			< COIL >				
L101	1-410-669-31	INDUCTOR 33UH					
L105	1-408-411-00	INDUCTOR 15UH					
				Q007	8-729-119-78	TRANSISTOR 2SC2785-HFE	
				Q008	8-729-119-78	TRANSISTOR 2SC2785-HFE	

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
Q009	8-729-119-78	TRANSISTOR 2SC2785-HFE		Q116	8-729-900-89	TRANSISTOR DTC144ES	
Q010	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q300	8-729-900-80	TRANSISTOR DTC114ES	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q301	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q011	8-729-900-89	TRANSISTOR DTC144ES		Q302	8-729-900-80	TRANSISTOR DTC114ES	
Q012	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q303	8-729-900-80	TRANSISTOR DTC114ES	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q304	8-729-900-80	TRANSISTOR DTC114ES	
Q013	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q305	8-729-900-80	TRANSISTOR DTC114ES	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q306	8-729-900-80	TRANSISTOR DTC114ES	
Q014	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q307	8-729-119-76	TRANSISTOR 2SA1175-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q308	8-729-901-01	TRANSISTOR DTC144EK	
Q015	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q401	8-729-119-78	TRANSISTOR 2SC2785-HFE	
	8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		Q402	8-729-173-38	TRANSISTOR 2SA733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q016	8-729-216-22	TRANSISTOR 2SA1162-G		Q403	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q100	8-729-901-01	TRANSISTOR DTC144EK		8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		
Q101	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q404	8-729-119-78	TRANSISTOR 2SC2785-HFE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
Q102	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		8-729-920-74	TRANSISTOR 2SC2412K-QR (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		
Q103	8-729-900-80	TRANSISTOR DTC114ES (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		Q804	8-729-202-03	TRANSISTOR 2SD1408-Y	
Q105	8-729-901-01	TRANSISTOR DTC144EK		Q805	8-729-140-96	TRANSISTOR 2SD774-34	
Q107	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q109	8-729-022-54	TRANSISTOR 2SC3779C,D-AA (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)					
Q110	8-729-901-01	TRANSISTOR DTC144EK		JR004	1-216-296-91	METAL GLAZE	0 5% 1/8W
Q111	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170K/M2171K/M2171KR)		JR007	1-216-295-00	METAL GLAZE	0 5% 1/10W
Q112	8-729-119-78	TRANSISTOR 2SC2785-HFE		JR008	1-216-295-00	METAL GLAZE	0 5% 1/10W
Q113	8-729-900-89	TRANSISTOR DTC144ES (KV-M2170K/M2171K/M2171KR)		JR009	1-216-295-00	METAL GLAZE	0 5% 1/10W
Q114	8-729-901-01	TRANSISTOR DTC144EK		JR012	1-216-295-00	METAL GLAZE	0 5% 1/10W
Q115	8-729-173-38	TRANSISTOR 2SA9733-K (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		JR013	1-216-295-00	METAL GLAZE	0 5% 1/10W
				JR014	1-216-296-91	METAL GLAZE	0 5% 1/8W
				JR015	1-216-295-00	METAL GLAZE	0 5% 1/10W
				JR017	1-216-295-00	METAL GLAZE	0 5% 1/10W
				JR018	1-216-296-91	METAL GLAZE	0 5% 1/8W
				JR019	1-216-296-91	METAL GLAZE	0 5% 1/8W
				JR020	1-216-295-00	METAL GLAZE	0 5% 1/10W
				JR021	1-216-296-91	METAL GLAZE	0 5% 1/8W
				JR026	1-216-296-91	METAL GLAZE	0 5% 1/8W
				JR027	1-216-296-91	METAL GLAZE	0 5% 1/8W
				R001	1-216-222-91	METAL GLAZE	10K 5% 1/8W
				R002	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W
				R004	1-216-238-00	METAL GLAZE	47K 5% 1/8W
				R005	1-216-081-00	METAL GLAZE	22K 5% 1/10W

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R006	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R088	1-216-061-91	METAL GLAZE	3.3K 5% 1/10W
R008	1-216-031-91	METAL GLAZE	180 5% 1/10W	R089	1-216-061-91	METAL GLAZE	3.3K 5% 1/10W
R009	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R090	1-216-061-91	METAL GLAZE	3.3K 5% 1/10W
R010	1-216-041-00	METAL GLAZE	470 5% 1/10W	R091	1-249-427-11	CARBON	6.8K 5% 1/4W
R011	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R093	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W
R012	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R094	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R013	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R095	1-216-081-00	METAL GLAZE	22K 5% 1/10W
R014	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R096	1-216-033-00	METAL GLAZE	220 5% 1/10W
R015	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R097	1-216-051-91	METAL GLAZE	1.2K 5% 1/10W
R016	1-216-025-91	METAL GLAZE	100 5% 1/10W	R098	1-216-051-91	METAL GLAZE	1.2K 5% 1/10W
R017	1-216-025-91	METAL GLAZE	100 5% 1/10W	R099	1-216-200-91	METAL GLAZE	1.2K 5% 1/8W
R018	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R102	1-216-234-91	METAL GLAZE	33K 5% 1/8W
R019	1-216-174-91	METAL GLAZE	100 5% 1/8W	R104	1-216-059-91	METAL GLAZE	2.7K 5% 1/10W
R020	1-216-089-91	METAL GLAZE	47K 5% 1/10W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R021	1-216-174-91	METAL GLAZE	100 5% 1/8W				
R022	1-216-295-00	METAL GLAZE	0 5% 1/10W	R105	1-216-025-91	METAL GLAZE	100 5% 1/10W
							(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R024	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R106	1-216-053-00	METAL GLAZE	1.5K 5% 1/10W
R025	1-216-222-91	METAL GLAZE	10K 5% 1/8W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R026	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R027	1-216-206-00	METAL GLAZE	2.2K 5% 1/8W				
R028	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R029	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R107	1-216-017-91	METAL GLAZE	47 5% 1/10W
R030	1-215-900-11	METAL OXIDE	22K 5% 2W F				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R031	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R108	1-216-067-00	METAL GLAZE	5.6K 5% 1/10W
R032	1-216-049-91	METAL GLAZE	1K 5% 1/10W	R109	1-216-025-91	METAL GLAZE	100 5% 1/10W
R033	1-216-049-91	METAL GLAZE	1K 5% 1/10W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R034	1-247-855-91	CARBON	10K 5% 1/4W	R110	1-216-101-00	METAL GLAZE	150K 5% 1/10W
R035	1-247-863-91	CARBON	22K 5% 1/4W	R111	1-216-085-00	METAL GLAZE	33K 5% 1/10W
R036	1-216-059-91	METAL GLAZE	2.7K 5% 1/10W	R112	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W
R037	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R039	1-216-089-00	METAL GLAZE	47K 5% 1/10W	R113	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W
R040	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R042	1-216-230-00	METAL GLAZE	22K 5% 1/8W				
R044	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R045	1-216-081-00	METAL GLAZE	22K 5% 1/10W				
R046	1-216-105-91	METAL GLAZE	220K 5% 1/10W				
R047	1-216-077-00	METAL GLAZE	15K 5% 1/10W	R114	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R049	1-216-041-00	METAL GLAZE	470 5% 1/10W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R052	1-216-238-91	METAL GLAZE	47K 5% 1/8W	R115	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W
R055	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W				(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)
R060	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R061	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R116	1-216-049-91	METAL GLAZE	1K 5% 1/10W
R062	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R117	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R063	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W	R118	1-216-075-00	METAL GLAZE	12K 5% 1/10W
R064	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R122	1-216-025-91	METAL GLAZE	100 5% 1/10W
R065	1-216-073-00	METAL GLAZE	10K 5% 1/10W				(KV-M2170K/M2171K/M2171KR)
R066	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R123	1-216-089-00	METAL GLAZE	47K 5% 1/10W
R067	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R124	1-216-025-91	METAL GLAZE	100 5% 1/10W
R068	1-216-073-00	METAL GLAZE	10K 5% 1/10W	R125	1-216-025-91	METAL GLAZE	100 5% 1/10W
R069	1-247-863-91	CARBON	22K 5% 1/4W	R126	1-216-025-91	METAL GLAZE	100 5% 1/10W
R070	1-216-065-00	METAL GLAZE	4.7K 5% 1/10W	R127	1-216-180-00	METAL GLAZE	180 5% 1/10W
R071	1-216-081-00	METAL GLAZE	22K 5% 1/10W	R128	1-216-073-00	METAL GLAZE	10K 5% 1/10W
R072	1-216-230-00	METAL GLAZE	22K 5% 1/8W	R133	1-249-429-11	CARBON	10K 5% 1/4W
R073	1-216-089-00	METAL GLAZE	47K 5% 1/10W				
R074	1-216-073-00	METAL GLAZE	10K 5% 1/10W				
R075	1-249-436-11	CARBON	39K 5% 1/4W				
R078	1-216-071-91	METAL GLAZE	8.2K 5% 1/10W				
R079	1-216-061-00	METAL GLAZE	3.3K 5% 1/10W				
R080	1-216-057-91	METAL GLAZE	2.2K 5% 1/10W				
R081	1-249-438-11	CARBON	56K 5% 1/4W				

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
R134	1-216-029-00	METAL GLAZE 150 5% 1/10W (KV-M2170L/M2171L/M2170U/M2171U)		R178	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
	1-216-031-91	METAL GLAZE 180 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M1440K/M1441K/ M1441KR)		R179	1-216-212-91	METAL GLAZE 3.9K 5% 1/8W	
R136	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R180	1-216-049-00	METAL GLAZE 1K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
R137	1-216-109-00	METAL GLAZE 330K 5% 1/10W		R205	1-247-741-11	CARBON 150 5% 1/2W	
R138	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R301	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R141	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W		R302	1-216-037-91	METAL GLAZE 330 5% 1/10W	
R142	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W		R303	1-216-090-00	METAL GLAZE 51K 5% 1/10W	
R143	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E/M2170L/M2171L/ M2170U/M2171U)		R304	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R144	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W (KV-M2170K/M2171K/M2171KR)		R305	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R145	1-216-206-00	METAL GLAZE 2.2K 5% 1/8W (KV-M2170K/M2171K/M2171KR)		R306	1-216-113-91	METAL GLAZE 470K 5% 1/10W	
R146	1-216-043-91	METAL GLAZE 560 5% 1/10W		R307	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R147	1-216-043-91	METAL GLAZE 560 5% 1/10W (KV-M2170K/M2171K/M2171KR)		R308	1-216-234-91	METAL GLAZE 33K 5% 1/8W	
R149	1-216-057-91	METAL GLAZE 2.2K 5% 1/10W (KV-M2170K/M2171K/M2171KR)		R309	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
R151	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R310	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R153	1-216-097-00	METAL GLAZE 100K 5% 1/10W		R311	1-216-093-00	METAL GLAZE 68K 5% 1/10W	
R154	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R312	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R155	1-216-081-00	METAL GLAZE 22K 5% 1/10W		R313	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R157	1-216-049-91	METAL GLAZE 1K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R314	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R158	1-216-031-91	METAL GLAZE 180 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R315	1-216-045-00	METAL GLAZE 680 5% 1/10W	
	1-216-039-00	METAL GLAZE 390 5% 1/10W (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R316	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R159	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W		R317	1-216-182-00	METAL GLAZE 220 5% 1/8W	
R160	1-216-238-91	METAL GLAZE 47K 5% 1/8W		R318	1-216-019-91	METAL GLAZE 56 5% 1/10W	
R161	1-216-295-00	METAL GLAZE 0 5% 1/10W (KV-M2170A/M2171A/M2170D/M2171D/M2170E/ M2171E/M2170K/M2171K/M2171KR/ M2170L/M2171L/M2170U/M2171U)		R322	1-216-022-91	METAL GLAZE 75 5% 1/10W	
R162	1-216-017-91	METAL GLAZE 47 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R323	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R163	1-249-407-11	CARBON 150 5% 1/4W		R325	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
R167	1-216-246-91	METAL GLAZE 100K 5% 1/8W		R326	1-216-115-91	METAL GLAZE 560K 5% 1/10W	
R168	1-249-407-11	CARBON 150 5% 1/4W		R327	1-216-097-91	METAL GLAZE 100 5% 1/10W	
R169	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R333	1-216-037-91	METAL GLAZE 330 5% 1/10W	
R170	1-216-063-91	METAL GLAZE 3.9K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R334	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R171	1-216-069-00	METAL GLAZE 6.8K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)		R335	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R175	1-216-049-91	METAL GLAZE 1K 5% 1/10W		R336	1-216-296-91	METAL GLAZE 0 5% 1/8W	
R176	1-216-049-91	METAL GLAZE 1K 5% 1/10W		R337	1-216-295-00	METAL GLAZE 0 5% 1/10W	
R177	1-216-049-91	METAL GLAZE 1K 5% 1/10W		R339	1-216-061-00	METAL GLAZE 3.3K 5% 1/10W	
				R340	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
				R341	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
				R342	1-216-186-91	METAL GLAZE 330 5% 1/8W	
				R343	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				R344	1-216-295-00	METAL GLAZE 0 5% 1/10W	
				R345	1-216-089-00	METAL GLAZE 47K 5% 1/10W	
				R347	1-216-041-00	METAL GLAZE 470 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R348	1-216-073-00	METAL GLAZE 10K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R349	1-216-105-91	METAL GLAZE 220K 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R350	1-216-033-00	METAL GLAZE 220 5% 1/10W (KV-M2170A/M2171A/M2170B/M2171B/M2170D/ M2171D/M2170E/M2171E)	
				R351	1-216-292-11	METAL GLAZE 8.2M 5% 1/8W	
				R352	1-216-262-91	METAL GLAZE 470K 5% 1/8W	
				R353	1-247-804-11	CARBON 75 5% 1/4W	
				R354	1-216-025-91	METAL GLAZE 100 5% 1/10W	
				R355	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
				R356	1-216-121-91	METAL GLAZE 1M 5% 1/10W	
				R357	1-216-095-00	METAL GLAZE 82K 5% 1/10W	

A

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REF.NO.	PART NO.	DESCRIPTION	REMARK			REF.NO.	PART NO.	DESCRIPTION	REMARK			
R358	1-216-009-91	METAL GLAZE	22	5%	1/10W	R804	1-217-778-11	FUSIBLE	1K	5%	1W	F
R359	1-216-089-00	METAL GLAZE	47K	5%	1/10W	R806	1-216-349-00	METAL OXIDE	1	5%	1W	F
R361	1-216-022-91	METAL GLAZE	75	5%	1/10W	R807	1-247-795-91	METAL GLAZE	33	5%	1/10W	
R362	1-216-022-91	METAL GLAZE	75	5%	1/10W	R809	1-215-916-51	METAL OXIDE	680	5%	3W	F
R363	1-216-022-91	METAL GLAZE	75	5%	1/10W	R810	1-247-895-91	CARBON	470K	5%	1/4W	
R401	1-216-041-00	METAL GLAZE	470	5%	1/10W	R811	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R402	1-249-431-11	CARBON	15K	5%	1/4W	R812	1-215-869-11	METAL OXIDE	1K	5%	1W	F
R403	1-249-431-11	CARBON	15K	5%	1/4W	R814	1-217-811-11	FUSIBLE	0.47	5%	1/4W	
R405	1-249-389-11	CARBON	4.7	5%	1/4W	R815	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
R406	1-216-091-00	METAL GLAZE	56K	5%	1/10W	R816	1-216-369-00	METAL OXIDE	1	5%	2W	F
R407	1-216-041-00	METAL GLAZE	470	5%	1/10W	R817	1-216-447-00	METAL OXIDE	27	5%	2W	F
R408	1-216-033-00	METAL GLAZE	220	5%	1/10W	R818	1-202-830-00	SOLID	10K	10%	1/2W	
R410	1-247-804-11	METAL GLAZE	75	5%	1/4W	R819	1-249-441-11	CARBON	100K	5%	1/4W	
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR)				R820	1-249-935-11	CARBON	3.3K	5%	1/4W	F
	1-247-698-11	METAL GLAZE	68	5%	1/4W	R822	1-216-101-00	METAL GLAZE	150K	5%	1/10W	
		(KV-M2170L/M2171L/M2170U/M2171U)				R823	1-216-232-91	METAL GLAZE	470	5%	1/8W	
R411	1-216-085-00	METAL GLAZE	33K	5%	1/10W	R824	1-216-125-00	METAL GLAZE	1.5M	5%	1/10W	
R412	1-216-105-91	METAL GLAZE	220K	5%	1/10W	R825	1-216-105-91	METAL GLAZE	220K	5%	1/10W	
R413	1-216-097-00	METAL GLAZE	100K	5%	1/10W	R828	1-247-899-11	CARBON	680K	5%	1/4W	
R414	1-216-097-00	METAL GLAZE	100K	5%	1/10W		< VARIABLE RESISTOR >					
R415	1-216-222-91	METAL GLAZE	10K	5%	1/8W	RV102	1-241-765-11	RES, ADJ, METAL GLAZE	22K			
		(KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)				RV801	1-241-630-11	RES, ADJ, CARBON	10K			
							< SWITCH >					
R416	1-216-081-00	METAL GLAZE	22K	5%	1/10W	S001	1-571-532-21	SWITCH, TACTIL				
R501	1-208-806-11	METAL CHIP	10K	0.50%	1/10W	S002	1-571-532-21	SWITCH, TACTIL				
R502	1-216-677-11	METAL CHIP	12K	0.50%	1/10W	S003	1-571-532-21	SWITCH, TACTIL				
R503	1-216-081-00	METAL GLAZE	22K	5%	1/10W	S004	1-571-532-21	SWITCH, TACTIL				
R504	1-216-095-00	METAL GLAZE	82K	5%	1/10W	S005	1-571-532-21	SWITCH, TACTIL				
R505	1-216-075-00	METAL GLAZE	12K	5%	1/10W	S006	1-571-532-21	SWITCH, TACTIL				
R507	1-216-350-11	METAL OXIDE	1.2	5%	1W	S601	1-571-433-21	SWITCH, PUSH (AC POWER)				
R508	1-215-865-11	METAL OXIDE	220	5%	1W		< TRANSFORMER >					
R509	1-249-383-11	CARBON	1.5	5%	1/4W	T601	1-427-962-11	TRANSFORMER, LINE FILTER				
R600	1-216-365-00	METAL OXIDE	0.47	5%	2W	T602	1-429-207-11	TRANSFORMER, CONVERTER				
						T801	1-437-090-00	HDT				
R601	1-205-909-11	WIREWOUND	3.3	5%	10W	T802	1-453-199-11	TRANSFORMER ASSY, FLYBACK (NX-1741/H2E)				
R603	1-215-858-51	METAL OXIDE	15	5%	1W		< THERMISTOR >					
R604	1-215-927-00	METAL OXIDE	47K	5%	3W	THP601	1-808-059-31	THERMISTOR (POSITIVE)				
R606	1-249-441-11	CARBON	100K	5%	1/4W		< TUNER >					
R607	1-216-366-51	METAL OXIDE	0.56	5%	2W	TU101	1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A)				
R608	1-216-647-11	METAL CHIP	680	0.50%	1/10W	1-693-331-00	TUNER (BT-AC401)					
R609	1-215-859-00	METAL OXIDE	22	5%	1W		(KV-M2170B/M2171B/M2170D/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)					
R610	1-249-419-11	CARBON	1.5K	5%	1/4W							
R611	1-215-430-00	METAL	2.4K	1%	1/4W		< CRYSTAL >					
	1-202-719-00	SOLID	1M	10%	1/2W	X001	1-578-774-11	VIBRATOR, CRYSTAL				
R615	1-217-371-00	FUSIBLE	0.47	10%	1/4W	X302	1-760-710-21	VIBRATOR, CRYSTAL				
R617	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W		(KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)					
R618	1-216-659-11	METAL CHIP	2.2K	0.50%	1/10W							
R620	1-215-479-00	METAL	270K	1%	1/4W							
R621	1-249-429-11	CARBON	10K	5%	1/4W							
R622	1-247-895-91	METAL GLAZE	470K	5%	1/4W							
R623	1-216-081-00	METAL GLAZE	22K	5%	1/10W							
R624	1-216-033-00	METAL GLAZE	220	5%	1/10W							
R625	1-216-073-00	METAL GLAZE	10K	5%	1/10W							
R626	1-216-089-00	METAL GLAZE	47K	5%	1/10W							
R627	1-216-346-00	METAL OXIDE	0.56	5%	1W							
R630	1-249-401-11	CARBON	47	5%	1/4W							
R800	1-215-887-00	METAL OXIDE	150	5%	2W							
R801	1-247-891-00	CARBON	330K	5%	1/4W							
R802	1-247-807-31	CARBON	100	5%	1/4W							
R803	1-216-081-00	METAL GLAZE	22K	5%	1/10W							



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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
	*A-1638-074-A	C BOARD, COMPLETE (KV-M2170A/M2171A/ ***** M2170B/M2171B/ M2170D/M2171D/ M2170E/M2171E)					< RESISTOR >
	*A-1638-068-A	C BOARD, COMPLETE (KV-M2170K/M2171K/ ***** M2171KR/M2170L/ M2171L/M2170U/ M2171U)		R701	1-249-417-11	CARBON	1K 5% 1/4W
		< CAPACITOR >		R702	1-249-417-11	CARBON	1K 5% 1/4W
C701	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R705	1-247-791-91	CARBON	22 5% 1/4W
C702	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R706	1-247-791-91	CARBON	22 5% 1/4W
C703	1-102-117-00	CERAMIC 820PF 10% 50V (KV-M2170K/M2171K/M2171KR/M2170L/ M2171L/M2170U/M2171U)		R707	1-247-791-91	CARBON	22 5% 1/4W
C704	1-102-824-00	CERAMIC 470PF 5% 50V		R708	1-247-815-91	CARBON	220 5% 1/4W
C705	1-102-824-00	CERAMIC 470PF 5% 50V		R709	1-247-815-91	CARBON	220 5% 1/4W
C706	1-102-824-00	CERAMIC 470PF 5% 50V		R710	1-247-815-91	CARBON	220 5% 1/4W
C707	1-136-189-00	FILM 0.1MF 10% 250V		R711	1-249-417-11	CARBON	1K 5% 1/4W
C709	1-162-114-00	CERAMIC 0.0047MF 2KV		R714	1-249-417-11	CARBON	1K 5% 1/4W
C710	1-104-660-91	ELECT 47MF 20% 16V		R715	1-249-417-11	CARBON	1K 5% 1/4W
		< CONNECTOR >		R716	1-249-417-11	CARBON	1K 5% 1/4W
CNC71	*1-568-881-51	PIN, CONNECTOR 6P		R717	1-247-758-11	CARBON	3.3K 5% 1/2W
CNC72	*1-568-880-51	PIN, CONNECTOR 5P		R718	1-247-758-11	CARBON	3.3K 5% 1/2W
CNC73	1-695-915-11	TAB (CONTACT)		R719	1-247-758-11	CARBON	3.3K 5% 1/2W
CNC76	1-695-915-11	TAB (CONTACT)		R720	1-216-487-11	METAL OXIDE	12K 5% 3W F
		< DIODE >		R721	1-216-487-11	METAL OXIDE	12K 5% 3W F
D701	8-719-991-33	DIODE 1SS133T-77		R722	1-216-487-11	METAL OXIDE	12K 5% 3W F
D702	8-719-991-33	DIODE 1SS133T-77		R724	1-202-814-11	SOLID	33K 10% 1/2W
D703	8-719-991-33	DIODE 1SS133T-77		R725	1-202-846-00	SOLID	470K 10% 1/2W
D704	8-719-991-33	DIODE 1SS133T-77		R726	1-202-844-00	SOLID	330K 10% 1/2W
D705	8-719-991-33	DIODE 1SS133T-77		R727	1-202-848-00	SOLID	680K 10% 1/2W
D706	8-719-991-33	DIODE 1SS133T-77		R729	1-216-348-00	METAL OXIDE	0.82 5% 1W F
D707	8-719-991-33	DIODE 1SS133T-77		R734	1-247-815-91	CARBON	220 5% 1/4W
D708	8-719-991-33	DIODE 1SS133T-77		R735	1-247-815-91	CARBON	220 5% 1/4W
D709	8-719-991-33	DIODE 1SS133T-77		R736	1-247-815-91	CARBON	220 5% 1/4W
D716	8-719-991-33	DIODE 1SS133T-77		R744	1-247-756-11	CARBON	2.2K 5% 1/2W
D717	8-719-054-81	DIODE 1SS292		R745	1-247-756-11	CARBON	2.2K 5% 1/2W
D718	8-719-991-33	DIODE 1SS133T-77		R746	1-247-756-11	CARBON	2.2K 5% 1/2W
D719	8-719-054-81	DIODE 1SS292					< VARIABLE RESISTOR >
D723	8-719-991-33	DIODE 1SS133T-77		RV701	1-230-641-11	RES, ADJ, METAL GLAZE	2.2M
D724	8-719-054-81	DIODE 1SS292		RV702	1-241-656-21	RES, ADJ, METAL FILM	110M
		< CRT SOCKET >					*****
	1-526-990-21	SOCKET, CRT					
		< TRANSISTOR >					
Q701	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q702	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q703	8-729-119-78	TRANSISTOR 2SC2785-HFE					
Q704	8-729-906-70	TRANSISTOR BF871-127					
Q705	8-729-906-70	TRANSISTOR BF871-127					
Q706	8-729-906-70	TRANSISTOR BF871-127					
Q707	8-729-200-17	TRANSISTOR 2SA1091-0					
Q708	8-729-200-17	TRANSISTOR 2SA1091-0					
Q709	8-729-200-17	TRANSISTOR 2SA1091-0					

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REF.NO.	PART NO.	DESCRIPTION	REMARK	REF.NO.	PART NO.	DESCRIPTION	REMARK
MISCELLANEOUS							
*****							
1-452-032-00	MAGNET, DISK; 10MM Ø			4-203-127-41	MANUAL, INSTRUCTION (KV-M2170A/M2171A)		
1-452-094-00	MAGNET, ROTATABLE DISK; 15MM Ø					(ITALIAN)	
1-452-277-00	MAGNET, BMC			4-203-127-51	MANUAL, INSTRUCTION (KV-M2170B/M2171B)		
A 1-453-199-11	TRANSFORMER ASSY, FLYBACK (KV-1741/U2B)					(FRENCH/GERMAN/ITALIAN)	
A 1-454-090-21	COIL, DEGAUSSING (KV-M2170A/M2170B/M2171D/M2170E/M2171E/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)			4-203-127-11	MANUAL, INSTRUCTION (KV-M2170D/M2171D)		
A 1-426-145-00	COIL, DEGAUSSING (KV-M2171A/M2171B/M2170D)			4-203-130-11	MANUAL, INSTRUCTION (KV-M2170D/M2171D)		
1-503-258-21	SPEAKER					(GERMAN)	
A 1-540-006-12	CAP ASSY, HIGH-VOLTAGE (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)			4-203-127-71	MANUAL, INSTRUCTION (KV-M2170E/M2171E)		
A 1-540-007-11	CAP ASSY, HIGH-VOLTAGE (KV-M2170K/M2171K/M2171KR/M2170L/M2171L/M2170D/M2171D)			4-203-127-81	MANUAL, INSTRUCTION (KV-M2170E/M2171E)		
(SPANISH)						(PORTUGUESE)	
A 1-571-433-21	SWITCH, PUSH (AC POWER)			4-203-122-91	MANUAL, INSTRUCTION (KV-M2170K/M2171K)		
A 1-690-270-21	CORD, POWER (WITH CONNECTOR) 2.5A/250V (KV-M2170A/M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)					(ENGLISH/RUSSIAN/CZECH/HUNGARIAN/ POLISH/BULGARIAN)	
A 1-590-460-11	CORD, POWER (WITH CONNECTOR) 7.0A/250V (KV-M2170K/M2171K/M2171KR)			4-203-154-91	MANUAL, INSTRUCTION (KV-M2171KR)		
A 1-590-752-11	CORD, POWER (WITH PLUG) 2.5A/250V (KV-M2170L/M2171L/M2170U/M2171U)					(BULGARIAN/ENGLISH/RUSSIAN)	
1-693-303-11	TUNER (TELE1X001A) (KV-M2170A/M2171A/M2171KR)			4-203-122-61	MANUAL, INSTRUCTION (KV-M2170L/M2171L/M2170U/M2171U)		
8-598-331-00	TUNER (BT-AC401) (KV-M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)					(ENGLISH)	
1-693-310-11	TUNER (TELE4X002A) (KV-M2170K/M2171K)			*4-203-124-01	INDIVIDUAL CARTON (KV-M2170A/M2170K/M2171K/M2171KR/M2170L/M2171L)		
1-693-302-11	TUNER (UV1315) (KV-M2170L/M2171L)			*4-203-124-11	INDIVIDUAL CARTON (KV-M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		
8-598-333-00	TUNER (BT-AU601) (KV-M2170U/M2171U)			*4-203-123-01	INDIVIDUAL CARTON (KV-M2170U/M2171U)		
A 8-451-295-45	DEFLECTION YORE (Y21PP2BA)			*4-203-111-01	CUSHION (UPPER) (ASSY) (KV-M2170A/M2170K/M2171K/M2171KR/M2170L/M2171L/M2170U/M2171U)		
V901	8-738-784-05 PICTURE TUBE (SD-169) (A510XH6X)			*4-203-111-11	CUSHION (UPPER) (ASSY) (KV-M2171A/M2170B/M2171B/M2170D/M2171D/M2170E/M2171E)		
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REMOTE COMMANDER  
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1-473-194-11 COMMANDER, STANDARD TYPE (RM-36)

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